

**AN ECONOMIC REPORT
TO THE GOVERNOR
OF THE STATE OF **TENNESSEE****

**THE STATE'S
ECONOMIC
OUTLOOK
JANUARY**

2014

AN ECONOMIC REPORT TO THE GOVERNOR OF THE STATE OF TENNESSEE

Matthew N. Murray, Associate Director and Project Director
Center for Business and Economic Research

PREPARED BY THE

Center for Business and Economic Research
College of Business Administration
The University of Tennessee
Knoxville, Tennessee

IN COOPERATION WITH THE

Appalachian Regional Commission
Tennessee Department of Finance and Administration
Tennessee Department of Economic and Community Development
Tennessee Department of Revenue
and
Tennessee Department of Labor and Workforce Development

THE STATE'S
ECONOMIC
OUTLOOK
JANUARY **2014**

CONTRIBUTORS

An Economic Report to the Governor of the State of Tennessee

AUTHORS

UT Center for Business and Economic Research

Matthew N. Murray, *Associate Director and Project Director*

William F. Fox, *Director*

Lawrence M. Kessler, *Research Assistant Professor*

Vickie C. Cunningham, *Research Associate*

Ahiteme N. Houndonougbo, *Graduate Research Assistant*

UT Department of Agricultural Economics

Harwood D. Schaffer, *Research Assistant Professor, Agricultural Policy Analysis Center*

Daryll E. Ray, *Blasingame Chair of Excellence, Professor and Director of the Agricultural Policy Analysis Center*

PROJECT SUPPORT STAFF

UT Center for Business and Economic Research

Betty A. Drinnen, *Administrative Specialist*

Carrie B. McCamey, *Communications Coordinator*

Laura Ogle-Graham, *Program Manager*

The preparation of this report was financed in part by the following agencies: the Tennessee Department of Finance and Administration, the Tennessee Department of Economic and Community Development, the Tennessee Department of Revenue, the Tennessee Department of Labor and Workforce Development, and the Appalachian Regional Commission.

This material is the result of tax-supported research and as such is not copyrightable. It may be freely reprinted with the customary crediting of the source.

UT Publication Authorization Number R01-1493-265-001-14.

PREFACE

This 2014 volume of *An Economic Report to the Governor of the State of Tennessee* is the thirty-eighth in a series of annual reports compiled in response to requests by state government officials for assistance in achieving greater interdepartmental consistency in planning and budgeting efforts sensitive to the overall economic environment. Both short-term, or business cycle-sensitive forecasts, and longer-term, or trend forecasts, are provided in this report.

The quarterly state forecast through the first quarter of 2016 and annual forecast through 2023 represent the collective judgment of the staff of the University of Tennessee's Center for Business and Economic Research in conjunction with the Quarterly and Annual Tennessee Econometric Models. The national forecasts were prepared by IHS Global Insight, Inc. Tennessee forecasts, current as of January 2014, are based on an array of assumptions, particularly at the national level, which are described in Chapter One. Chapter Two details evaluations for major sectors of the Tennessee economy, with an agriculture section provided by the University of Tennessee Agricultural Policy Analysis Center. Chapter Three discusses Tennessee's role in the international economy and presents the long-run outlook and forecast for the state. Chapter Four presents manufacturing trends and advanced manufacturing in Tennessee.

The primary purpose of this annual volume—published, distributed, and financed through the Tennessee Department of Finance and Administration, Tennessee Department of Economic and Community Development, the Tennessee Department of Revenue, the Tennessee Department of Labor and Workforce Development, and the Appalachian Regional Commission—is to provide wide public dissemination of the most-current possible economic analysis to planners and decision-makers in the public and private sectors.



Matthew N. Murray
Associate Director and Project Director
Center for Business and Economic Research

CONTENTS

EXECUTIVE SUMMARY	XI
CHAPTER 1: THE U.S. ECONOMY	1
1.1. Introduction.....	1
1.2. The U.S. Economy: Year in Review	2
<i>Components of GDP</i>	2
<i>Investment</i>	4
<i>Government Purchases</i>	7
<i>Trade</i>	7
<i>Inflation and Prices</i>	8
<i>The Labor Market</i>	8
1.3. The U.S. Forecast.....	9
<i>Consumption and the Labor Market</i>	11
<i>Investment and Interest Rates</i>	13
<i>Federal Budget</i>	14
<i>International Trade</i>	15
<i>Inflation and Prices</i>	15
1.4. Alternatives Scenarios.....	16
1.5. Forecast Summary and Conclusions.....	16
CHAPTER 2: THE TENNESSEE ECONOMY: SHORT-TERM OUTLOOK.....	19
2.1. Introduction.....	19
2.2. The Current Economic Environment	20
2.3. Fiscal Update	24
<i>National Perspective</i>	24
<i>Tennessee and Southeastern States Tax Revenues</i>	25
<i>Franchise and Excise Tax Collections</i>	25
2.4. Short-Term Outlook	27
<i>Tennessee Forecast at a Glance</i>	31
2.5. Situation and Outlook for Tennessee Agriculture.....	31
<i>Overview of Agriculture in Tennessee</i>	31
<i>Tennessee Agricultural Sector Outlook</i>	34
<i>Ag Sector Issues</i>	36

CHAPTER 3: THE TENNESSEE ECONOMY: LONG-TERM OUTLOOK.....	39
3.1. Introduction.....	39
3.2. Job Growth	40
3.3. Unemployment.....	43
3.4. Population	49
3.5. Interest Rates and the Price Level.....	50
3.6. Income and Output	51
 CHAPTER 4: PROMOTING ADVANCED MANUFACTURING CLUSTERS IN TENNESSEE	 53
4.1. Introduction.....	53
4.2. Context: Trends in Tennessee Manufacturing	54
4.3. Advanced Manufacturing.....	57
4.4. Clusters and Harvard's Cluster Mapping Project.....	58
4.5. Tennessee Manufacturing Clusters	60
4.6. Narrowing the Set of Target Industries: Identification of Potential Clusters for Expansion	62
4.7. High-Wage Clusters.....	64
<i>Nonmetal Mining</i>	64
<i>Aerospace Engines</i>	66
<i>Information Technology</i>	66
<i>Biopharmaceuticals</i>	67
<i>Power Generation and Transmission</i>	68
<i>Aerospace Vehicles and Defense</i>	68
4.8. Well-Established Clusters.....	69
<i>Chemical Products</i>	69
<i>Medical Devices</i>	69
<i>Metal Manufacturing</i>	72
<i>Forest Products</i>	73
4.9. High-Potential Clusters	74
4.10. Aspirational Clusters	75
4.11. Conclusion	76
4.12. Appendix	79
4.13. References	80

APPENDIX A: FORECAST DATA.....	1
Quarterly Forecast Tables	2
Annual Forecast Tables	26
 APPENDIX B: HISTORICAL DATA	 41
Quarterly History Tables.....	42
Annual History Tables	66

FIGURES AND TABLES

CHAPTER 1: THE U.S. ECONOMY	1
Figure 1.1. Inflation-Adjusted GDP Accelerated in 2013 after a Timid First Quarter	3
Figure 1.2. The Rebound of the Housing Sector Was Sustained in 2013 but Sales, Starts and Prices are Still Well Below Pre-Recession Levels	5
Figure 1.3. The Federal Budget Deficit has Fallen Considerably but Remains High.....	6
Figure 1.4. Exports Grew Slightly Faster Than Imports for the Third Consecutive Year...	7
Figure 1.5. The Unemployment Rate Declined Steadily in 2013 as the Economy Added an Average 182,000 Jobs Monthly	9
Figure 1.6. Inflation-Adjusted GDP is Projected to Carry the Momentum of the Recovery in the Next Few Years	12
Figure 1.7. The Unemployment Rate is Expected to Continue to Fall Steadily	13
Figure 1.8. Mortgage Rates are Expected to Rise as the Economy Improves and The Fed Tapers its Long-Term Asset Purchase Programs	14
Figure 1.9. Inflation Will Remain Subdued in Part Because of Falling Energy Prices....	15
 CHAPTER 2: THE TENNESSEE ECONOMY: SHORT-TERM OUTLOOK.....	 19
Figure 2.1. Many Counties Throughout the State Observe Negative Job Growth	20
Figure 2.2. Tennessee's Monthly Unemployment Rate among the Highest of the Southeastern States	22
Figure 2.3. Unemployment Rate, November 2013	22
Figure 2.4. Tennessee Has the Fourth Highest Per Capita Personal Income (in Current Dollars) among Southeast States, 2012	23
Figure 2.5. Per Capita Income Shows Wide Variation across Tennessee	24
Figure 2.6. Tennessee Franchise and Excise Tax Collections, Fiscal Year-To-Date (August – December) Peaked in FY 2013.....	26
Table 2.1. Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted	28

Figure 2.7. U.S. and Tennessee Manufacturing Employment Remain Below Pre-Recession Levels from 2008	29
Figure 2.8. U.S. and Tennessee Manufacturing Output Trend Upward.....	29
Figure 2.9. TN Unemployment Rate Continues Downward Trend But Lags Behind U.S. – Annual Unemployment Rate, 2004 – 2017.....	30
Figure 2.10. Leading Tennessee Commodities for Cash Receipts, 2012.....	34
CHAPTER 3: THE TENNESSEE ECONOMY: LONG-TERM OUTLOOK.....	39
Figure 3.1. Manufacturing is Playing a Smaller Role in Local Economic Development	41
Figure 3.2. Nonfarm Job Growth Will Restore Employment to Prerecession Levels in 2014	42
Figure 3.3. Tennessee Nonfarm Employment Undergoes Structural Change.....	42
Figure 3.4. The Great Recession Continues to Affect Local Unemployment Rates	43
Table 3.1. Selected U.S. and Tennessee Economic Indicators.....	44
Table 3.2. Alternative Measures of Labor Underutilization Revel the Depths of the Nation’s Unemployment Problem.....	46
Figure 3.5. Number of Unemployed Persons per Job Opening Slowly Returning to Prerecession Levels.....	47
Figure 3.6. Labor Force Participation Rates Take Unprecedented Dip	48
Figure 3.7. Annual Unemployment Rates Are Falling But Remain Elevated	49
Figure 3.8. Tennessee Population Growth.....	50
CHAPTER 4: PROMOTING ADVANCED MANUFACTURING CLUSTERS IN TENNESSEE	53
Figure 4.1. U.S. and Tennessee Manufacturing Employment Enjoys Short-Term Rebound	55
Figure 4.2. Manufacturing Employment as Share of Total Nonfarm Employment Trends Downward.....	56
Figure 4.3. U.S. and Tennessee Manufacturing Output Trend Upward.....	57
Figure 4.4. Michael Porter’s Diamond Model Points to Four Factors Affecting Clusters.....	59
Figure 4.5. Total Employment in Tennessee by Type of Manufacturing Cluster.....	61
Table 4.1. High-Wage Clusters.....	64
Table 4.2. High-Wage Clusters and Subclusters.....	65
Figure 4.6. Nonmetallic Mineral Mining and Quarrying Establishments Were Largely Concentrated in East Tennessee, 2011	66
Figure 4.7. U.S. and Tennessee Employment in Information Technology Cluster, 1998 to 2011	67

Table 4.3. Well-Established Clusters	70
Figure 4.8. Job Growth per Sector 1998 to 2011	70
Table 4.4. Well-established Clusters and Subclusters.....	71
Figure 4.9. Chemical Manufacturing Establishments Were Concentrated Near Memphis, Chattanooga, Nashville, and Knoxville, 2011	72
Figure 4.10. Medical Equipment and Supplies Manufacturing Establishments Were Located Near Major Metropolitan Areas, 2011	72
Figure 4.11. Primary Metal Manufacturing Establishments Were Largely Concentrated in West Tennessee, 2011	73
Table 4.5. High-Potential Clusters	74
Table 4.6. High-Potential Clusters and Subclusters	75
Table 4.7. Aspirational Clusters.....	76
Table 4.8. Aspirational Clusters and Subclusters	77
Table A.4.1. Clusters excluded from sample	79
Table A.4.2. Manufacturing Clusters in Tennessee.....	79
APPENDIX A: FORECAST DATA.....	1
Quarterly Forecast Tables	2
Annual Forecast Tables	26
APPENDIX B: HISTORICAL DATA	41
Quarterly History Tables.....	42
Annual History Tables	66

EXECUTIVE SUMMARY

The U.S. Economy

After five years of sluggish recovery, the U.S. economy is poised for strong growth in 2014 and 2015. According to early estimates, inflation-adjusted gross domestic product (GDP) grew 1.9 percent in 2013, compared to 2.8 percent in 2012 and 1.8 percent in 2011. Despite the slow pace of the recovery, many indicators now point to stronger fundamentals in the economy and brighter growth prospects in the quarters ahead.

Consumer confidence rose and remained high for most of 2013, amid persistent fiscal uncertainties from Washington, DC. Rallying stock markets and rising home prices were the main factors that boosted confidence. Inflation-adjusted household net worth grew by almost 10 percent in 2013, surpassing for the first time its pre-crisis level. As a result, consumers spent more and firms were more eager to hire. Inflation-adjusted consumer spending grew by 2.0 percent and the economy added approximately 2.2 million jobs in 2013. That is an average of 182 thousand jobs added monthly. The unemployment rate fell by more than a full percentage point over the course of the year, down to 6.7 percent in December 2013. That is the lowest it has been since late 2008.

For the third consecutive year, both construction and manufacturing sectors recorded net payroll employment growth, adding 164 thousand and 60 thousand jobs. The rebound of the housing sector, which started in 2012, was sustained in 2013. Household spending on new housing grew by 14.6 percent. That is the second consecutive year of double-digit growth. The number of housing starts increased by 19.0 percent to reach 931 thousand units in 2013, compared to 783 units in 2012. Home prices also kept their upward trend dating back to 2012. Despite its solid performance, the housing sector still has a long way to go to recover fully. Sales of new houses are still less than one-half their pre-crisis figures.

The Federal Reserve maintained its accommodating monetary policies throughout 2013. However, citing improving labor market conditions, it announced in December that it

would start reducing long-term asset purchases beginning in January 2014. This move by the Fed – commonly referred to as the “taper” – has been widely anticipated by observers since mid-2013. The reaction of the markets to the announcement was mostly favorable as the move was perceived as a confirmation by the Fed that the economy is indeed strengthening. The Fed also insisted that, provided inflation is not an issue, it would maintain its targeted interest rate at low levels until the unemployment rate falls well below 6.5 percent and other indicators confirm strong labor market conditions.

The federal government deficit was cut down to \$680 billion in 2013 after four consecutive years of deficits higher than a trillion dollars. The persistent political divide forced a two-week government shutdown in October. Eventually a rare compromise was reached in December 2013 as the two parties agreed on the main lines of the federal budget for 2014 and 2015. State and local government purchases have bottomed out in 2013, and they are expected to increase timidly in the next few years.

The slow global recovery, especially in Europe, continues to hold back U.S. exports. However, for the third straight year, exports have grown slightly faster than imports. The trade deficit amounted to \$500 billion in 2013, down from \$550 billion in 2012. The trade deficit is now slightly less than 3 percent of GDP, the lowest it has been since 2009.

Inflation remains subdued in part because of falling energy prices. As measured by the consumer price index (CPI), overall prices rose by 1.5 percent in 2013 compared to 2.1 percent in 2012 and 3.1 percent in 2011. Core-CPI, which excludes prices of energy and food, increased 1.8 percent compared to 2.1 percent in 2012.

The economy is expected to carry self-sustained growth momentum into 2014. The passage of the bipartisan budget deal in December 2013 removes some of the fiscal uncertainties that have clouded the outlook of the economy in the past three years. In addition, it appears markets received favorably

the decision by the Fed to start tapering its latest round of quantitative easing. The positive outlook for the global economy in the coming quarters will also help boost U.S. exports, and hence growth.

Inflation-adjusted GDP is projected to grow by a solid 2.7 percent in 2014, followed by 3.2 and 3.4 percent growth in 2015 and 2016 respectively. This year is expected to start on a relatively healthy note with 2.0 percent growth in the first quarter, followed by 2.5 percent growth in the second quarter. The economy is then projected to

switch gears and accelerate to 2.7 percent and 3.3 percent annual growth in the second half of the year. Despite stronger growth, inflation will likely remain quiet as energy prices continue to fall and market competition restrains sellers.

Although many remain cautious regarding the sustainability of the recovery, most observers agree the U.S. economy is now in much better shape than it was a few years ago and faces brighter prospects in the coming quarters.

The Tennessee Economy

The Short-Term Economic Outlook

Tennessee's economy showed signs of improvement in 2013 over 2012. Inflation-adjusted gross domestic product (GDP) grew by 2.6 percent for the year and nonfarm employment increased by 1.5 percent, representing an addition of over 40,000 jobs to the state economy. Despite this job growth the annual unemployment rate increased slightly, from 8.0 percent in 2012 to 8.2 percent in 2013.

Nominal personal income was up 2.7 percent for the year, slightly behind the pace of income growth for the nation. Nominal taxable sales increased at a rate of 2.8 percent in 2013. This followed a 4.8 percent gain in taxable sales in 2012.

Tennessee is expected to see slightly faster growth in 2014 and 2015. Nonfarm employment is expected to increase by 1.5 percent in 2014 followed by stronger 1.8 percent growth in 2015. Leisure and hospitality, professional and business services, and transportation equipment will experience the largest rates of job growth in 2014 and 2015. Manufacturing employment will continue to grow, but at a slow rate of 1.0 percent in 2014 and 0.5 percent in 2015. Growth in the manufacturing sector will be carried by gains in durable goods manufacturing which will offset job losses in nondurable goods manufacturing.

Tennessee's unemployment rate will fall to 7.5 percent in 2014, and 7.0 percent in 2015. This will mark the first time since 2008 that unemployment drops below 8.0 percent, however, it is still well above pre-recession levels. The number of

unemployed people is projected to decline by 8.3 percent this year and 6.2 percent in 2015. However, Tennessee's unemployment rate will remain above the nation's rate through the short-term forecast horizon.

Nominal personal income is projected to rise by 4.2 this year, followed by 4.5 percent in 2015. On a fiscal year basis, nominal personal income will increase by 3.3 percent in FY 2014 and 4.5 percent in FY 2015. Nominal taxable sales will show improved growth over 2013, increasing by 3.4 percent this year and 3.8 percent next year. On a fiscal year basis, nominal taxable sales are expected to rise by 3.1 percent in FY 2014 and 3.9 percent in FY 2015.

Long-Term Economic Outlook

Tennessee's long-term outlook continues to be colored by the Great Recession which ended in the second quarter of 2009. Among the components of the economy that have been slow to heal are the housing market and the labor market. Fortunately, a full recovery to prerecession levels of annualized employment should occur in 2015. However, unemployment rates remain elevated and the labor force participation rate has moved to unprecedented lows. The labor market is likely to continue to struggle for the remainder of the decade.

The early 2000s were years of weak-to-modest growth, including the "jobless recovery" from the recession of 2001. The economy finally gained momentum and by mid-decade the economy was

performing well by virtually all measures. Then the housing bubble broke, financial markets tumbled and ripple effects led to the longest and deepest recession since the Great Depression. State gross domestic product fell 3.7 percent in 2009 and U.S. gross domestic product slipped 2.8 percent. Most measures of economic activity then began to improve. Jobs, however, fell again in 2010, and the unemployment rate continued to rise. The following year finally produced broader improvements, though the housing market continued to struggle.

As discussed in Chapters 1 and 2, the near-term outlook for the national and state economies is as bright as it has been since the end of the recession. This will help the economy move toward a full post-recession recovery in the next

two to three years. Manufacturing is expected to see employment gains sustained until 2017, at which point jobs will revert to trend and begin contracting again. Professional and business services and education and health services will enjoy especially strong growth in the coming decade.

The state unemployment rate will continue to drift down and should reach 6.0 percent in 2020. This is well above the 4.8 percent low that was registered in 2007 on the eve of the recession. Modest employment growth, large numbers of unemployed people and significant numbers of new entrants to the labor market will together keep the unemployment rate from falling faster. This will likely mean continued downward pressure on the state's labor force participation rate.

Promoting Advanced Manufacturing Clusters in Tennessee

Advanced manufacturing has emerged as a catch phrase intended to encompass manufacturing activities on the frontier in terms of end products and/or industrial processes. There is considerable interest in advanced manufacturing in Tennessee because of the significant role played by manufacturing in general and the recent renaissance in manufacturing employment across the country. By attracting and retaining firms engaged in advanced manufacturing, and by nurturing firms to adopt advanced manufacturing practices, it is hoped that the state can capture more jobs and build a stronger tax base.

This special chapter of the *Economic Report to the Governor* discusses manufacturing trends and advanced manufacturing in some detail to help inform policymakers and stakeholders. A definition of advanced manufacturing is used to help guide the analysis: “the application and integration of innovative technologies, materials and processes to the production of manufactured products.” It is important to note that this definition applies not only to sophisticated products, but also to production processes. Even simple, basic products like bricks, lumber, or sausage may be produced using advanced processes. The Tennessee economy may be able

to create competitive advantages by promoting the adoption of advanced processes and the production of advanced products.

While advanced manufacturing can be reasonably well defined conceptually, it is difficult in practice to identify advanced manufacturing activities based on available data. Cluster analysis is used here to explore alternative sets of industries, some of which may fall under the heading of advanced manufacturing. The most promising set of industries is referred to as the *high-wage* cluster. Since it is impossible to directly observe production practices, high wages are used as a proxy since earnings will be correlated with worker skill levels as well as capital investment. In general, one would expect more sophisticated processes where capital investment is deeper and human capital skills are stronger.

Advanced manufacturing can be defined as it is above, but it can also be viewed as a continuum of products and processes. In practice, virtually all manufacturing firms may benefit from the integration of more advanced production processes and the development of more advanced products that meet the needs of industry and final consumers. These considerations lead to the identification of three additional clusters that

may be used as targets for recruitment, retention, and industrial assistance. This includes the *well-established* cluster of existing industries that pay good wages and have a large employment base; the *high-potential* cluster of firms that pay good wages but have a small share of the national workforce;

and the *aspirational* cluster of firms that pay low wages but have a long-standing presence in the state. Each of these three clusters offer differential opportunities for growing the state's manufacturing base.

CHAPTER 1: THE U.S. ECONOMY

In this chapter—

- 1.1. Introduction**
- 1.2. The U.S. Economy: Year in Review**
 - Components of GDP
 - Investment
 - Government Purchases
 - Trade
 - Inflation and Prices
 - Labor Market
- 1.3. The U.S. Forecast**
 - Consumption and the Labor Market
 - Investment and Interest Rates
 - Federal Budget
 - International Trade
 - Inflation and Prices
- 1.4 Alternative Scenarios**
- 1.5 Forecast Summary and Conclusion**

1.1. Introduction

After years of weak recovery, the U.S. economy appears to be finally transitioning to a stronger path of growth. Early estimates by the Bureau of Economic Analysis show that inflation-adjusted gross domestic product (GDP) grew by 1.9 percent in 2013, compared to 2.8 percent in 2012 and 1.8 percent in 2011.

Although the pace is still relatively slow, many indicators suggest that the economy has strengthened over the course of this past year and will continue to do so in the periods ahead. Despite the fiscal uncertainties coming from Washington, DC, consumers have kept spending and their confidence remained high for most of 2013. At the same time, the housing sector continues to pick up steam and manufacturers have increased

production; both sectors continue to add jobs monthly. As a result, the unemployment rate fell steadily to 6.7 percent in December 2013, down from 7.9 percent at the beginning of the year.

The Federal Reserve has kept its accommodating monetary policies in place. In December, citing the improving conditions of the labor market and the economy in general, the Fed announced it would start reducing its asset purchases beginning in January 2014. However, it will continue to keep short-term interest rates low. The long-term asset-purchase programs, also known as quantitative easing, aim to lower longer-term interest rates when traditional monetary policy tools are ineffective. The response of the markets to the Fed's proposed tapering was mostly positive

1.1. Introduction, continued

as this announcement confirmed the strength of the economy and at the same time removed the uncertainty around when the Fed might start tightening its policies.

Factors that held back growth in 2013 include the continued federal budget turmoil and the inability of lawmakers to find common ground on how to deal with the nation's deficit and growing debt. The dreaded “sequester” – automatic across-the-board budget cuts – was postponed on January 1, but eventually went into effect on March 1, 2013. Also noticeable was the government shutdown from October 1-17 that put large numbers of federal employees on furlough and slowed economic activity. The expiration of the two-percentage point payroll tax cut also contributed to slower economic activity due to its negative impact on consumer spending.

In December 2013, both chambers of Congress finally reached an agreement on the federal budget for the next two years. The Bipartisan Budget Act

of 2013 substantially reduces the risks of another government shutdown and eases the effects of the “sequester” for 2014 and 2015.

Despite the lower short-term risks in the Eurozone and improving global financial conditions, the world economy continues to expand at a modest pace. Early projections for 2013 by the International Monetary Fund (IMF) point to a growth rate of 1.2 percent for advanced economies and 2.9 percent including all countries. This is compared to 1.5 percent and 3.2 percent growth, respectively, in 2012. However, the prospects of the global economy for 2014 are much brighter, partially due to the expected rebound in the Euro area.

The U.S. economy is expected to grow at a faster pace in the coming quarters as all sectors (aside from the federal government) now contribute to the recovery and many fiscal uncertainties have been diminished. Inflation is expected to remain low while unemployment continues to fall steadily.

1.2. The U.S. Economy: Year in Review

After slow but better-than-expected first-quarter growth of 1.1 percent, the U.S. economy picked up steam starting in the second quarter with a 2.5 percent annual increase in inflation-adjusted GDP growth. In the third quarter, the economy grew the fastest it had in two years, with a growth rate of 4.1 percent. Inventory accumulation by firms contributed significantly to the high growth rate recorded in the third quarter. Given its highly cyclical nature, inventory accumulation had a negative contribution to fourth quarter growth as expected. According to early estimates, the economy grew at the slower but healthy pace of 2.6 percent in the fourth quarter, mostly due to growth in consumption.

Overall, most indicators are pointing to a stronger U.S. economy. The consumer sentiment index topped 85 in July 2013, the highest it has been since the beginning of the financial crisis

in 2007. The unemployment rate fell steadily from 7.9 percent at the beginning of the year to 6.7 percent in December 2013. The last time the unemployment rate was below 7.0 percent was in November 2008 when the economy was losing several hundred thousand jobs each month. Stock markets recorded historical highs in 2013 confirming investors' confidence in the outlook of the economy.

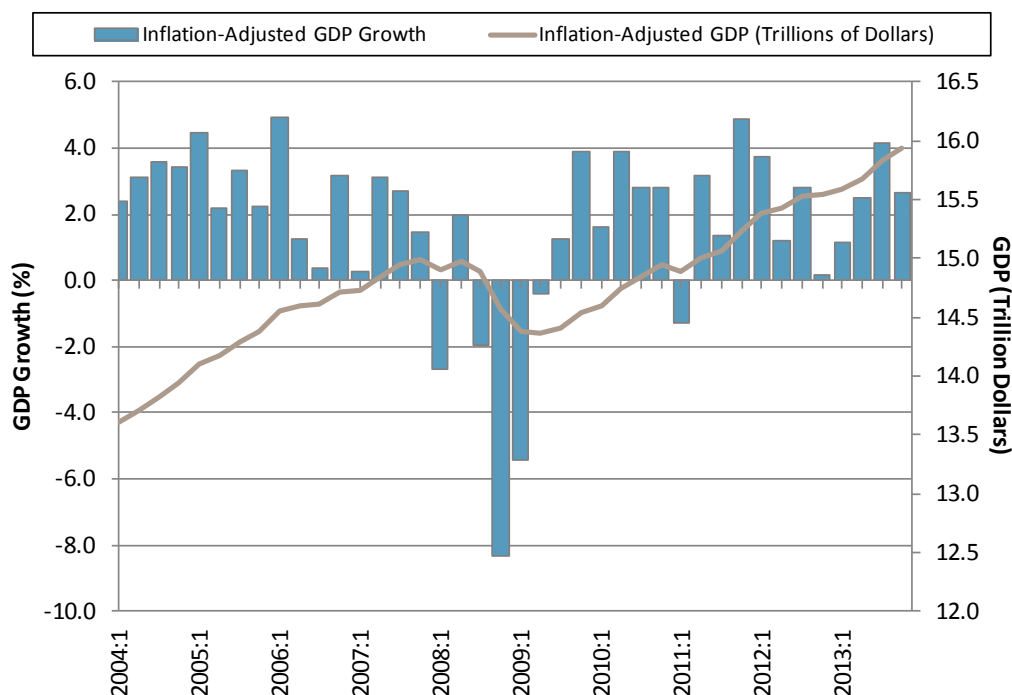
Components of GDP

Gross domestic product is composed of personal consumption expenditures, investment, government purchases and the balance of international trade (exports minus imports). In this section, we analyze how each of those components helped or slowed GDP growth last year.

Personal consumption expenditures are by far the largest component of the U.S. GDP. In 2013,

1.2. The U.S. Economy: Year in Review, continued

Figure 1.1. Inflation-Adjusted GDP Accelerated in 2013 after a Timid First Quarter



Source: Bureau of Economic Analysis and IHS Global Insight, Inc..

they accounted for 68.5 percent of GDP. Overall, inflation-adjusted consumer spending grew by 2.0 percent in 2013 compared to 2.2 percent in 2012 and 2.5 percent in 2011. Increases in consumer spending accounted for approximately 75 percent of the 1.9 percent GDP growth in 2013. The strongest consumption growth was recorded in the fourth quarter, up 3.7 percent compared to 2.0 percent and 1.8 percent growth for the preceding two quarters and 1.7 percent growth for the fourth quarter of 2012. The factors that typically help explain consumer spending include disposable income growth, consumer confidence and the unemployment rate. Inflation-adjusted disposable income grew by 0.8 percent in 2013 compared to 2.0 percent in 2012. The unemployment rate and the consumer sentiment index also moved in favorable directions. Inflation-adjusted household net worth grew by almost 10 percent in 2013, surpassing for the first time the pre-crisis level of wealth.

Personal consumption has three components: services, nondurable goods and durable goods. Spending on services accounts for approximately two-thirds of total consumption spending and is the least volatile of the three components. Service spending grew by just 1.0 percent last year, the lowest since the end of the recession. Healthcare services recorded annual growth of 2.0 percent, compared to less than 0.5 percent for housing services.

With a share of 21 percent, nondurable goods are the second largest category of consumption. Nondurable goods include food, beverages, clothing, medical products, gas and other similar short-lived products. Spending on nondurable goods increased by 2.0 percent in 2013 compared to 1.4 percent in 2012. Food, medical products and clothing are the sub-categories that contributed most to the observed growth in nondurable spending. Also worth noting is the 0.7 percent increase in spending on motor vehicle fuels and

1.2. The U.S. Economy: Year in Review, continued

other fluids. The last time inflation-adjusted spending on gasoline and other motor vehicle fluids increased was in 2006.

Personal spending on durable goods includes motor vehicles, furnishings, recreational goods, computers and other household equipment. Durable goods make up 12 percent of total consumption and are by far the most volatile of all three consumption categories. Spending on durable goods typically sinks during recessions and increases more than any other category during periods of recovery or expansion. In 2013, durable goods spending increased for the fourth consecutive year, by 7.2 percent, after 7.7 percent and 6.6 percent increases in 2012 and 2011. This is compared to a modest 1 percent increase in services and a 2.0 percent increase in nondurable goods.

Similar to the past four years, spending on recreational goods and equipment (computers and other information processing equipment) increased the most, with 10.5 percent growth. Purchases of new motor vehicles slowed down to 4.7 percent, compared to 12 percent in 2012 and 10.9 percent in 2011. Consumer spending on used vehicles plummeted in the early years of the recovery (8.7 percent and 4.8 percent decreases in 2010 and 2011) while purchases of new vehicles increased. Last year, however, purchases of used vehicles increased by almost 10 percent, more than double the growth in spending on new vehicles. The number of new domestic cars sold increased by 5.9 percent to reach 5.4 million units, a level similar to sale figures recorded in the years before the recession hit. Purchases of imported cars increased 2.7 percent to reach 2.2 million units, which is slightly lower than pre-recession levels.

Investment

Investment made up 16 percent of U.S. inflation-adjusted GDP and contributed 0.8 percentage points of the total 1.9 percent GDP growth in 2013. Investment includes three sub-components: nonresidential fixed investment, residential fixed investment (new housing) and the change in business inventories. All three contributed positively to GDP growth in 2013.

Note that investment, as included in GDP, does not include financial instruments like stocks and bonds.

With a share of roughly 77 percent, nonresidential fixed investment is by far the largest sub-component of investment. It includes equipment purchases by firms, non-tangible products such as software and licenses, and commercial structures. The growth in nonresidential fixed investment slowed for the third consecutive year. After the double-digit growth rates recorded immediately after the recession, it slowed down to 7.0 percent in 2012 and less than 3 percent in 2013. The main drags come from purchases of computers and transportation equipment, which fell by 2.2 percent and 0.4 percent respectively. Purchases of intellectual property products grew slightly less than previous years.

The second largest sub-component of investment is residential fixed investment, which refers to households' spending on new housing. It accounts for approximately 20 percent of investment and grew by 14.6 percent in 2013, slightly faster than in 2012. This is the third consecutive year of growth in housing and the second year of double-digit growth. Until the end of 2011, the housing sector was seen as the missing element of the U.S. recovery. It has finally rebounded since then, and for the last three years it advanced instead of hindered economic growth. In 2013, residential fixed investment directly accounted for 0.35 percentage points of the 1.9 percent growth rate of inflation-adjusted GDP, roughly a 20 percent contribution. The overall impact of housing on the economy is even higher if one were to account for the effects on related industries.

Despite two years of strong growth, inflation-adjusted residential fixed investment is still significantly below its pre-recession levels. In 2013, it increased to \$510 billion, which is roughly 60 percent of what was recorded in 2006. Growth in residential construction was particularly strong in the first three quarters of 2013, but slipped slightly in the last quarter of the year.

1.2. The U.S. Economy: Year in Review, continued

The number of housing starts increased by 19 percent to reach 931 thousand units in 2013, compared to 783 units in 2012. It is rather remarkable that in 2006 the number of housing starts was 1.8 million, which means the housing sector still has a long way to go to reach full recovery. Sales of existing houses grew by 9.8 percent compared to 16.0 percent for sales of new houses.

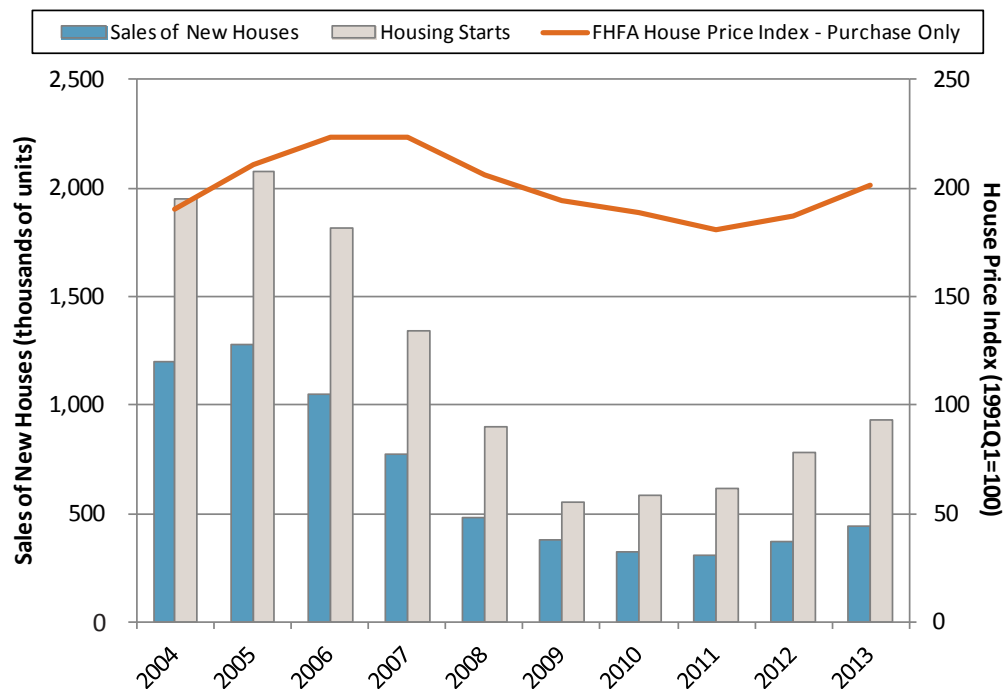
House prices have kept their upward trend since 2012. Average and median prices of existing homes increased for seven consecutive quarters to reach \$244 thousand and \$195 thousand respectively in the fourth quarter of 2013. The Federal Housing Finance Agency (FHFA) Housing Price Index increased for the first time since the housing bust and the Purchase-Only index increased for the second year in a row. This confirms the housing market has effectively begun to recover in earnest.

Despite the strong performance recorded in

the past two years, many observers worry that the recovery of the housing market is still weak and that tighter monetary policies by the Fed may stop the momentum. As is the case for investment in general, interest rates are one of the key determinants of growth in the housing sector. The multiple rounds of quantitative easing – asset-purchase programs – conducted by the Fed continue to keep interest rates low. Although a clear upward trend was noted in the course of 2013, rates are still significantly lower than their historical values. The 30-Year Fixed Mortgage Rate went from 3.3 percent at the beginning of the year to near 4.5 percent at the end. The annual average in 2013 was 3.99 percent, compared to 3.66 in 2012 and 4.46 percent in 2011. The average rate before the recession was above 6.0 percent.

Markets and rates have been particularly volatile since last summer, as speculation mounted regarding when the Fed might start slowing down

Figure 1.2. The Rebound of the Housing Sector Was Sustained in 2013 but Sales, Starts and Prices are Still Well Below Pre-Recession Levels



Source: U.S. Census Bureau and IHS Global Insight, Inc.

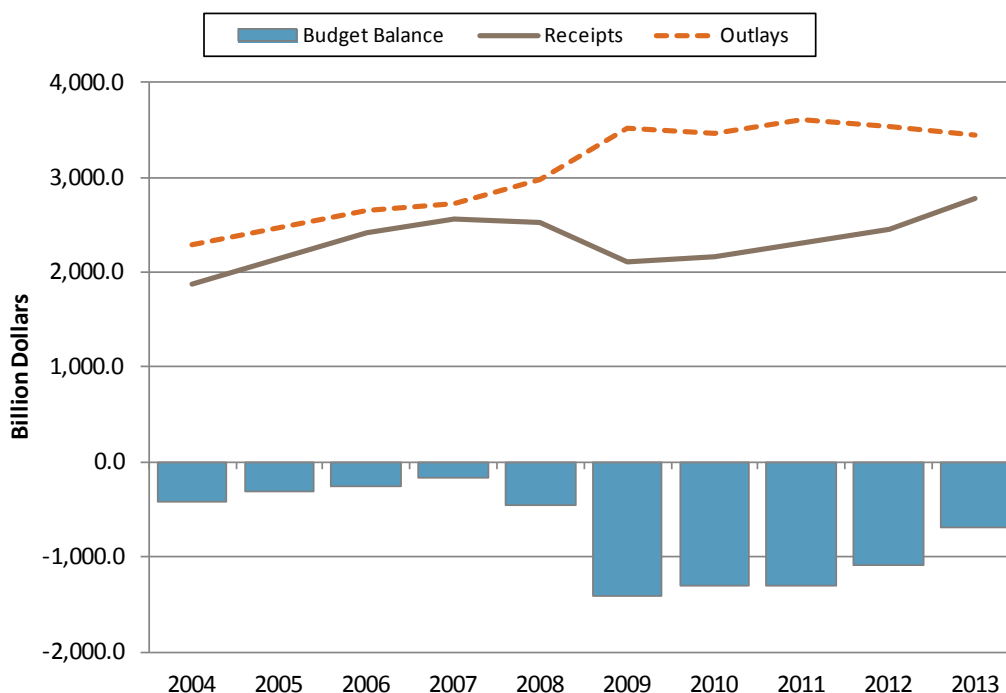
1.2. The U.S. Economy: Year in Review, continued

the asset-purchase programs. In May alone, the 30-Year fixed mortgage rate jumped more than a full percentage point to 4.4 percent. This spike followed a statement by the Fed's Chairman Ben Bernanke suggesting that the tapering could begin soon. Markets did ease as the fall unfolded. Finally, the Fed announced in December that it would start reducing the asset purchases in January 2014.

Other mid- to long-term rates also increased over the course of 2013. The 10-Year Treasury note yield went from an average of 1.8 percent in the fourth quarter of 2012 to 2.4 percent in the fourth quarter of 2013. Meanwhile, short-term rates remain close to zero. The 3-Month Treasury bill rate stayed close to 0.05 percent for most of 2013. The Fed has repeatedly reassured the public that even after it begins tapering the asset-purchase programs, it will continue to keep short-term interest rates low until the unemployment rate falls well below 6.5 percent, provided inflation is not an issue.

Changes in inventory, the highly cyclical component of investment, contributed strongly to GDP growth in the first three quarters of 2013 but came in negative in the fourth. The overall effect on GDP for the year was slightly positive (0.1 percentage points compared to 0.2 percentage points in 2012). Typically, the change in inventories only accounts for less than 3 percent of total investment, yet it can have a strong contribution to overall GDP growth in some quarters due to its cyclical nature. Overall, the change in inventories increased by almost 30 percent in 2013, driven mostly by changes in farm inventories, which more than tripled. Changes in nonfarm inventories, which includes manufacturing, wholesale and retail, shrunk by 21 percent in 2013. Specifically, changes in manufacturing inventories increased by nearly 30 percent in 2013 while changes in wholesale and retail inventories shrunk by 10.0 percent and 12.0 percent respectively.

Figure 1.3. The Federal Budget Deficit has Fallen Considerably but Remains High



Source: U.S. Treasury.

1.2. The U.S. Economy: Year in Review, continued

Government Purchases

Government purchases continue to fall both at the federal and state/local levels. Federal purchases fell for the third consecutive year while state and local government purchases fell for the fourth year in a row. Much of the fall in federal purchases is attributable to defense spending cuts. Defense purchases shrunk by 6.3 percent in 2013 after a 3.2 percent decrease in 2012. Nondefense purchases fell by 1.7 percent after 1.8 percent growth in the previous year. At the state and local level, much of the 0.2 percent decrease in purchases came from construction and equipment, which fell by 3.3 percent and 1.4 percent respectively.

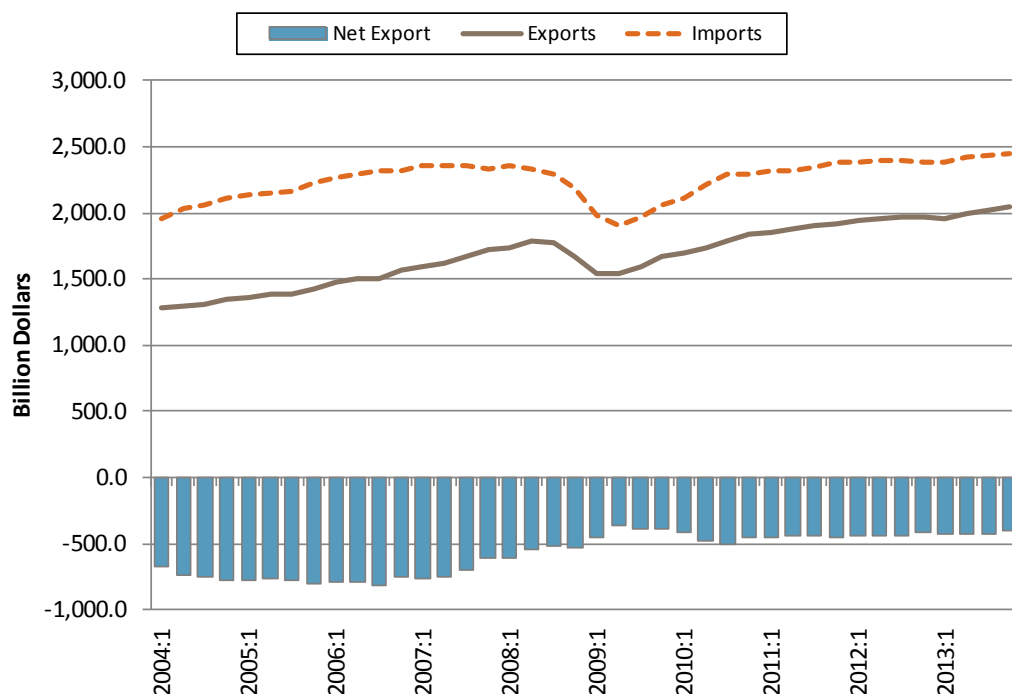
The federal government's deficit is still high but continues to shrink. After four years of deficits higher than a trillion dollars, the 2013 deficit was \$680 billion, down from \$1.09 trillion in 2012. The fiscal struggle continues in Washington, DC as both parties fail to find common ground on how to handle the nation's growing debt. A rare compromise was reached in December 2013 to

define the main lines of the federal budget for 2014 and 2015. The federal debt increased to \$17.2 trillion by the end of 2013, topping 100 percent of GDP for the second consecutive year.

Trade

In 2013, the U.S. recorded a trade deficit of \$502 billion (or 3 percent of GDP) in nominal terms. Exports and imports amounted to \$2.3 billion and \$2.8 billion respectively. Typically, purchases of foreign goods and services by U.S. consumers (imports) exceed sales of goods and services produced in the U.S. and sold to other countries (exports). However, it is worth noting that exports have grown faster than imports for the third consecutive year. Exports grew by 2.5 percent in 2013, compared to 1.5 percent for imports. As a result, the trade deficit shrank significantly over the past few years. Vehicles and parts, consumer goods, and industrial materials and supplies were among the top contributors to the growth in exports this past year. Imports of vehicles and parts only

Figure 1.4. Exports Grew Slightly Faster Than Imports for the Third Consecutive Year



Source: Bureau of Economic Analysis and IHS Global Insight, Inc.

1.2. The U.S. Economy: Year in Review, continued

increased by 1.5 percent in 2013, compared to an average of 14 percent in the previous three years.

Inflation and Prices

The most popular measure of the aggregate level of prices in the economy is the Consumer Price Index or the CPI. As measured by the CPI, overall prices rose in 2013 by just 1.5 percent, compared to 2.1 percent in 2012 and 3.1 percent in 2011.

Low energy and commodity prices continue to put downward pressure on overall inflation. Core-CPI, which excludes prices of energy and food, increased 1.8 percent. Food prices rose by 1.4 percent while prices of energy products and energy-related services fell by 0.5 percent. Producer prices (finished goods) rose by 1.3 percent in 2013, compared to 1.9 percent in 2012.

In general, inflation continues to be a lesser concern for the U.S. economy in the short term. This allows the Fed to keep its policies focused on employment. Aggregate demand has improved but remains weak due to a combination of domestic and international factors. Although consumer confidence has significantly improved in the last two years, unemployment remains relatively high. In addition, many advanced economies are still struggling with much of the Euro area still experiencing negative growth.

Although inflation is a not an imminent concern for the U.S. economy, very low inflation raises the threat of deflation, i.e. a drop in the overall level of prices. Most economists agree that deflation can be much more harmful to the economy than moderate inflation. When everyone expects prices and wages to be lower in the future, consumers slow spending and firms slow hiring. Therefore, a sustained drop in price levels can potentially lead to a recession.

Fed officials have offered assurances that they are keeping an eye on inflation and will take the appropriate actions to keep it from falling too low below their target of 2 percent or from rising too high above the target. Meanwhile, the Fed continues its accommodating policies with the federal fund rate now having been kept near zero

(less than 0.25 percent) for twenty consecutive quarters. Chairman Bernanke has reiterated on numerous occasions that, provided inflation is not an issue, short-term rates will be kept low until the unemployment rate drops below 6.5 percent and other labor market indicators show clear signs of strength.

The Labor Market

The national unemployment rate carried its downward momentum from the previous two years, falling from 7.9 percent in January to 6.7 percent by the end 2013, the lowest it has been since 2008. The decline in the unemployment rate has remained slow but consistent. In 2013, the unemployment rate stayed relatively flat at around 7.6 percent in the first half of the year, and then dropped steadily in the second half. However, the continued decline in the labor force participation rate is a matter for concern. It implies that part of the reason the unemployment rate is falling may have to do with discouraged unemployed workers who stop looking for work and are no longer considered unemployed.

Perhaps more encouraging, the economy continues to add more jobs each month, though the December 2013 jobs report was a disappointment. In 2013, 2.2 million nonfarm payroll jobs were added for an average of 182 thousand net jobs added each month. The total number of payroll jobs neared 137 million, 1 million short of the peak of 138 recorded before the recession hit. All of the job gains came from the private sector, which added 2.26 million jobs. The public sector (federal and state combined) reduced payroll size by 60 thousand jobs. The federal government eliminated 70 thousand jobs while state and local governments added 10 thousand. The recent statement by the Fed that it will start tapering its asset-purchase program is the ultimate evidence that labor market conditions have significantly improved since the beginning of the recovery.

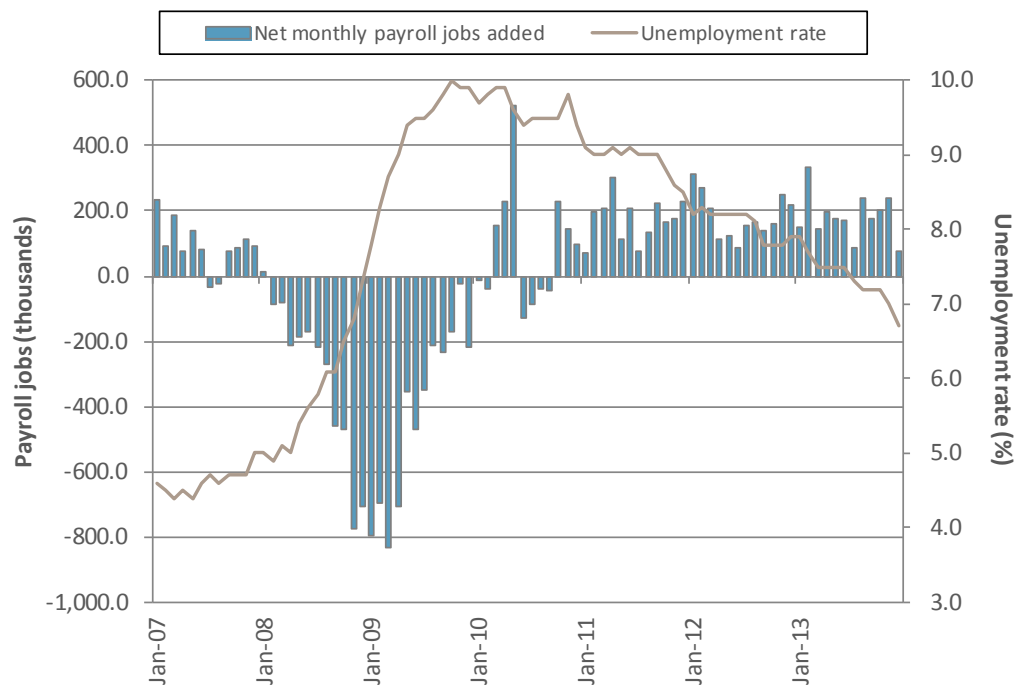
The construction sector came in strong for the second straight year with 164 thousand net jobs added in 2013, compared to 110 thousand

1.2. The U.S. Economy: Year in Review, continued

in 2012 and only 14 thousand in 2011. This is the third consecutive year of net gains in construction payrolls. The manufacturing sector, however, lost some of its momentum and only added 60

thousand jobs in 2013, compared to close to 200 thousand jobs added in each of the previous two years.

Figure 1.5. The Unemployment Rate Declined Steadily in 2013 as the Economy Added an Average 182,000 Jobs Monthly



Source: Bureau of Labor Statistics.

1.3. The U.S. Forecast

After five years of timid recovery, the U.S. economy is projected to carry self-sustained momentum and slight acceleration in 2014. Inflation-adjusted GDP is expected to grow by a solid 2.7 percent in 2014, following the modest 1.9 percent growth estimated for 2013. Despite the two-week government shutdown in October, projections point to annualized GDP growth of 2.6 percent in the fourth quarter of 2013, mostly driven by strong consumer spending. This follows remarkable 4.1 percent growth recorded in the

third quarter, with significant contributions from one-time factors such as changes in inventory. Calendar year 2014 is expected to start on a relatively solid note with 2.0 percent annualized growth in the first quarter, followed by 2.5 percent growth in the second quarter. The economy is then projected to accelerate to 2.7 percent and 3.3 percent annual GDP growth in the second-half of the year.

Many factors contribute to the brighter growth prospects for the U.S. economy in the near

1.3. The U.S. Forecast, continued

Is it time to raise the federal minimum wage?

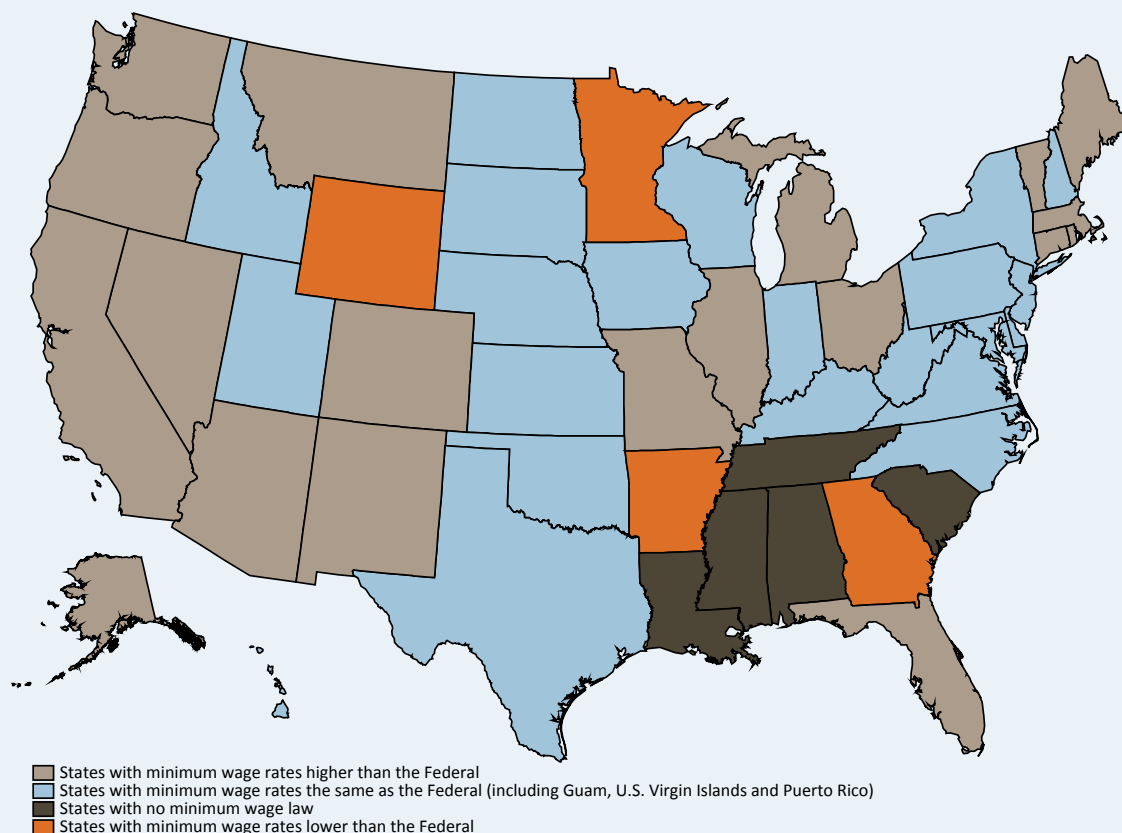
The Fair Labor Standards Act (FLSA) of 1938 established a national minimum wage that employers must pay non-exempt employees. The law has been regularly amended and the minimum wage has been increased on many occasions. The current federal minimum wage of \$7.25 effective July 24, 2009, is the result of a three-step increase voted on in 2007. For tipped workers, the federal minimum wage is \$2.13 and has not increased in 22 years.

In 2013, a bill was introduced in Congress to progressively raise the minimum wage to \$10.10 an hour. If passed, the Fair Minimum Wage Act would increase the federal minimum wage in three increments of \$0.95, and more importantly index it to inflation after the last increment in 2016. With an inflation index in place, future votes to increase the minimum wage will be less likely, as it will automatically increase as the cost of living rises. The bill also proposes to increase the minimum wage for tipped workers in \$0.85 increments to make it equal to 70 percent of the general minimum wage.

Many states have minimum wages higher than the federal level, and some states have already taken the extra step to index their minimum wages to inflation. According to the National Conference of State Legislatures, 34 states in addition to the District of Columbia and Puerto Rico proposed new legislation during the 2013 legislative session to address minimum

continued on page 11

Nineteen States Have Minimum Wage Higher Than the Federal Level as of January 1, 2013



1.3. The U.S. Forecast, continued

Is it time to raise the federal minimum wage? (continued)

wage issues. Five states, California, Connecticut, New Jersey, New York and Rhode Island have passed legislation to increase their minimum wages starting in 2014.

Recent protests across the country, especially from workers in the fast-food industry, have contributed to make the move popular among the American people. A November 2013 Gallup poll found that three out of four Americans are in favor of raising the federal minimum wage to \$9.00, up from the current \$7.25. Furthermore, support for the higher minimum wage appears to be strong regardless of gender, age, education level, race and political partisanship.

Reasons put forth by supporters of the raise include the increasing cost of living, widening income inequality and the increasing number of people living below the poverty line. The most affected demographic categories are youth and workers with little to no college education. Opponents, on the other hand, warn that the increase would cause these same groups to lose their job.

The question of whether a higher minimum wage helps or hurts employment and economic activity remains in dispute. According to basic economic theory, by not allowing firms to hire workers that are otherwise able and willing to work for lower pay, minimum wage laws may prevent the labor market from reaching a higher employment level. In these models, unskilled labor is most affected. However, many recent studies have exploited the variation in minimum wage laws across states and found little to no negative effects of higher minimum wages on employment. Some have even found slightly positive effects attributable to a multiplier effect. As low earners spend their additional income systematically, aggregate spending increases, firms hire more, and in turn, workers get more money to spend and so on. In addition, just as with worker compensation in general, higher minimum wages are credited for increasing productivity and reducing employee turnover.

While most Americans are in favor of raising the federal minimum wage, the outcome of the Fair Minimum Wage Act is still uncertain given the high political divide in Washington.

term. The passage of a bipartisan budget deal in December 2013 removes many of the fiscal uncertainties that have clouded the outlook of the economy in the past three years. The risks of another government shutdown are now quite low, although issues related to the debt ceiling are still a source of divide. The federal deficit was cut by one-half in the last two years and further cuts are expected going forward. The economy continues to add jobs monthly and the unemployment rate has steadily declined, lifting consumer confidence and spending.

In addition, it appears markets welcomed the decision by the Fed to start tapering its latest round of quantitative easing beginning January 2014. Not only was the tapering anticipated for a long time, it was received by the public as confirmation from the Fed that the economy is indeed improving. The

recovery of the housing sector has not faded as many feared and construction firms are hiring at a faster pace than before the financial crisis. It is expected that the Fed will end the asset purchase programs by the end of 2014 but it will continue to keep short-term interest rates low, helping sustain housing affordability.

The positive outlook for the global economy is also expected to provide a moderate boost to the U.S. economy in 2014, with exports growing strongly. Inflation will continue to be tame, partly due to falling energy prices and slower rises in healthcare costs.

Consumption and the Labor Market

Consumer spending was strong in the second half of 2013 and it is projected to keep its momentum going into 2014. Steady job growth,

1.3. The U.S. Forecast, continued

surging stock markets and rising home prices continue to boost consumer confidence and household net worth.

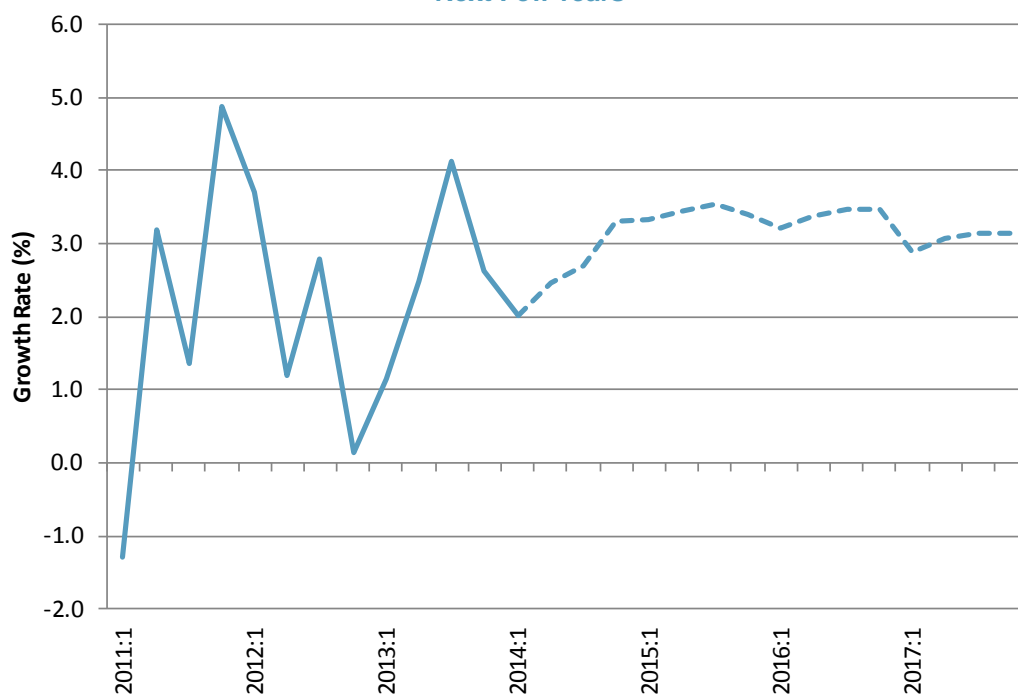
Inflation-adjusted disposable income is expected to grow by 3.3 percent in 2014, compared to 0.8 percent in 2013. Inflation-adjusted household net worth is expected to grow by 4.1 in 2014 to reach 107 percent of its 2006 level (before the housing market crash). Personal consumption expenditures will accelerate in the second quarter of 2014 with 3 percent annual growth, compared to 2.2 percent for the first quarter. Growth in the second-half of the year will be even stronger, with 3.2 percent and 3.3 percent gains in the third and fourth quarters. Overall, personal consumption expenditures will grow by 2.8 percent in 2014, compared to 2.0 percent in 2013.

With a 7.1 percent growth rate projected for 2014, spending on durable goods is expected

to continue to expand at a faster pace than nondurables (2.5 percent) and services (2.1 percent). Purchases of motor vehicles and motor vehicle parts account for a notable share of the expected growth in durables. As for nondurable goods, falling energy prices are expected to cause spending on gasoline and other energy goods to shrink by 0.3 percent.

Throughout the recovery, the growth of employment has been slow but steady. The unemployment rate fell below 7 percent in December 2013 and it is expected to drop steadily to 6.2 percent by the end of the year. The economy is expected to add an average of 194 thousand jobs per month in 2014, compared to 182 thousand in 2013. In addition to reinforcing consumer confidence, the end of the fiscal gridlock in Washington gives firms the much-needed reassurance to hire more workers.

Figure 1.6. Inflation-Adjusted GDP is Projected to Carry the Momentum of the Recovery in the Next Few Years



Source: Bureau of Economic Analysis and IHS Global Insight, Inc.

1.3. The U.S. Forecast, continued

Construction payrolls will carry their momentum from the fourth quarter of 2013 to grow by 2.9 percent in the first quarter of 2014, and then accelerate rapidly to reach 8.5 percent growth in the second half of the year. On average, 20 thousand construction jobs are projected to be added each month. The manufacturing sector will also expand in 2014, with payroll employment growth of 2.6 percent, compared to 0.5 percent in 2013.

Investment and Interest Rates

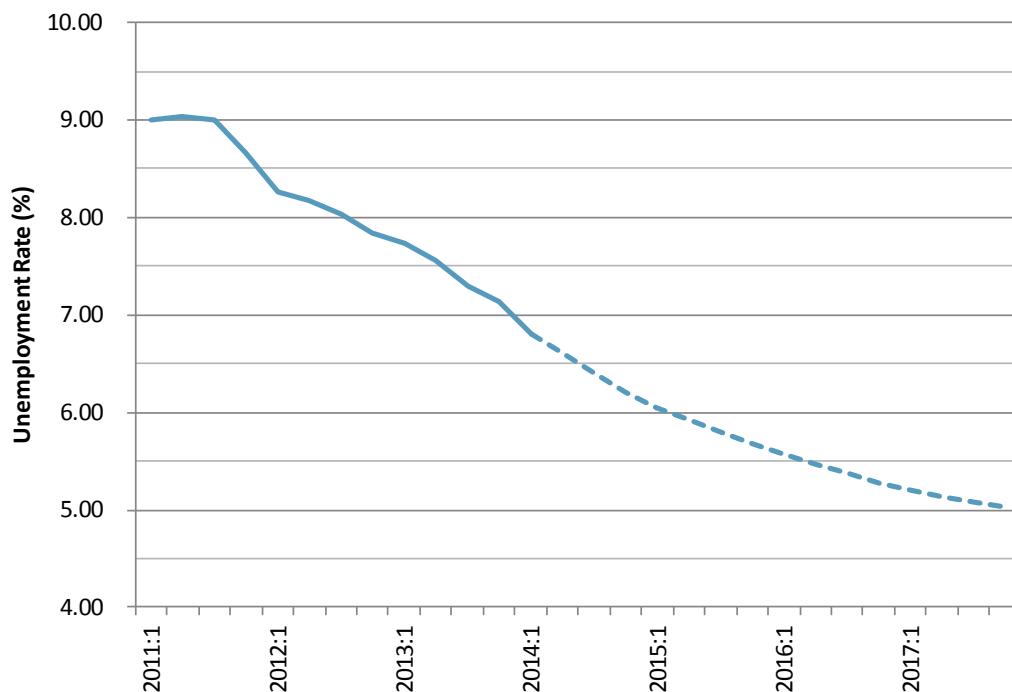
The much-welcomed rebound of the housing sector since 2012 continues to help lift the U.S. economy. Residential fixed investment is projected to grow by double digits in 2014 (almost 15 percent) for the third consecutive year. The second quarter will be particularly strong, with an annualized growth rate of 26 percent, followed by 20 percent in the third and fourth quarter. Housing starts are expected to increase to 1.16 million units

in 2014, up from 930 thousand units in 2013. Sales of existing homes will increase to 5.3 million units, about 82 percent of the 2006 figure. Sales of new homes will reach 560 thousand units, the highest since the recession, but still barely half of the 2006 figure.

House prices continue to rise, with a 4.5 percent increase expected in the average price of existing houses in 2014, following the 9.1 percent gain recorded in 2013. The average price of new houses is expected to grow at the slower pace of 2.6 percent, following the 11 percent hike recorded in 2013. The FHFA Housing Price Index and the FHFA Purchase-Only Index are projected to rise by 12.5 percent and 10 percent respectively.

Although the Fed has started tapering its latest round of quantitative easing, it has repeatedly assured the public that it will not raise the targeted federal funds rate until the unemployment rate falls well below 6.5 and other indicators confirm strong labor market conditions. This assumes

Figure 1.7. The Unemployment Rate is Expected to Continue to Fall Steadily



Source: Bureau of Labor Statistics and IHS Global Insight, Inc.

1.3. The U.S. Forecast, continued

that inflation remains quiet. As a result, investors can expect to continue to enjoy historically low short-term interest rates for 2014 and most of 2015. Longer-term rates, however, are expected to increase progressively as the Fed cuts off its purchases of long-term assets. The 30-Year Fixed Mortgage Rate has jumped a full percentage point in the course of 2013 up from 3.4 percent at the beginning of the year and is expected to increase to 4.8 percent by the end of 2014. Many fear the taper and the rise of long-term rates could stop the momentum of the housing recovery. Nonetheless, mortgage rates are expected to remain low by historical standards.

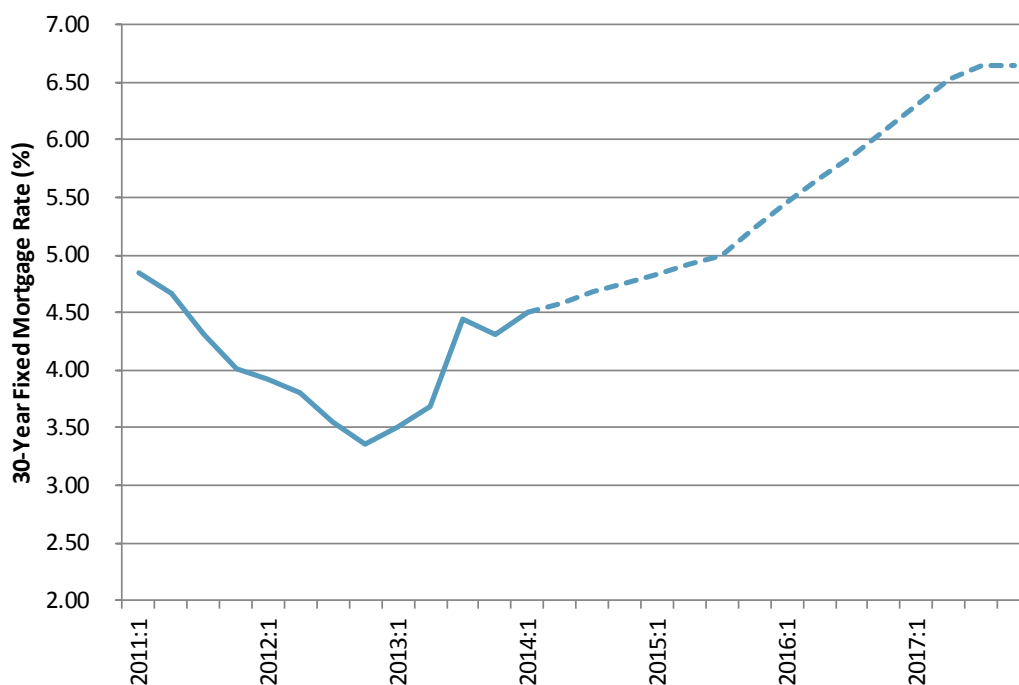
Nonresidential fixed investment is expected to grow by nearly 5 percent in 2014 despite the expiration of the accelerated depreciation tax incentive in December 2013. Purchases of business equipment, including computers and commercial vehicles account for most of the growth in nonresidential fixed investment.

Federal Budget

After years of gridlock, Congress reached a rare bipartisan budget agreement that defines the main lines of the federal budget for 2014 and 2015. With that deal, the risks of another government shutdown in the near future are dramatically diminished. In addition, some of the deeper cuts to a number of programs as required by the “sequester” can now be avoided. However, the deal does not address the issue of raising the debt ceiling or the longer-term problem of the nation’s debt.

The federal deficit was cut by nearly 40 percent in 2013 down to \$680 billion. The deficit is projected to fall slightly to \$670 billion in 2014 and fall further to \$575 billion in 2015. Federal receipts are expected to increase by 9.0 percent this year, compared to a 7.0 percent increase in outlays. The federal debt will grow to \$18.2 trillion in 2014, exceeding 100 percent of GDP for the third straight year.

Figure 1.8. Mortgage Rates are Expected to Rise as the Economy Improves and The Fed Tapers its Long-Term Asset Purchase Programs



Source: Board of Governors of the Federal Reserve System and IHS Global Insight, Inc.

1.3. The U.S. Forecast, continued

Government purchases will continue to decline at the federal level. Both defense and nondefense expenditures are set to shrink by 1.1 percent in 2014. At the state and local level, however, the fiscal contraction ended in 2013 and small growth of 0.4 percent is expected for 2014.

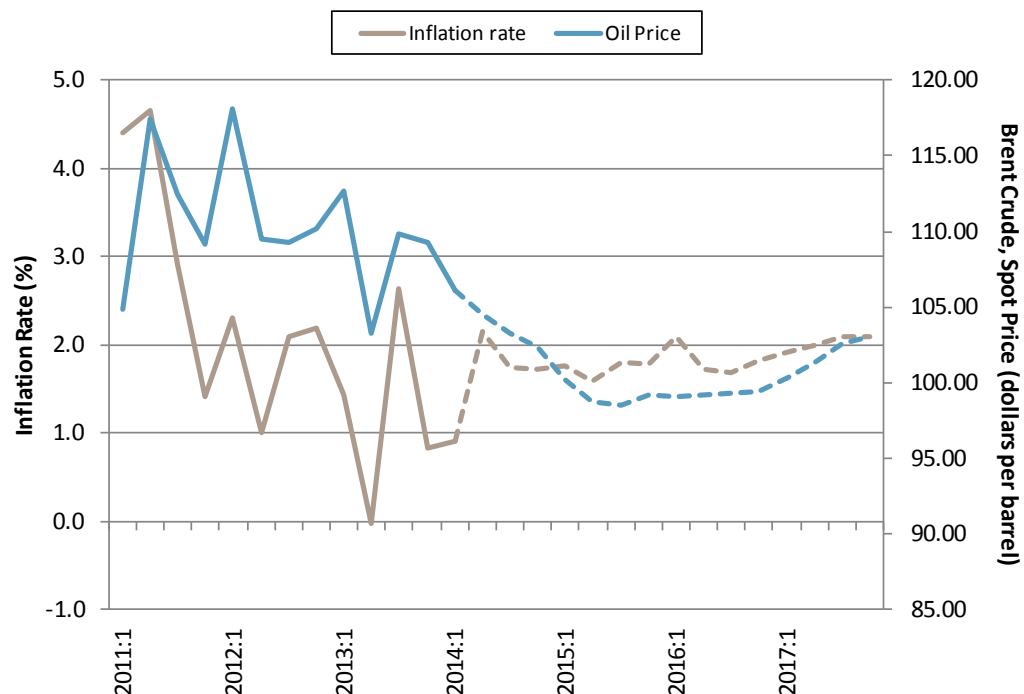
International Trade

The favorable outlook for the global economy in 2014 is certainly good news for U.S. exports. Inflation-adjusted exports of goods and services are projected to grow by 4.6 percent in 2014, the fastest pace since 2011. Imports will record similar growth and the trade deficit will be close to 2.7 percent of GDP. Imports of oil and related products will shrink by 2.6 percent, following a 7.0 percent decrease in 2013. Exports of food and beverages are expected to increase by nearly 5.0 percent in 2014, after three years of decline.

Inflation and Prices

Inflation has remained low in the last few years for a variety of reasons and it is expected to stay low in 2014. Stiff market competition and the absence of broad-based cost pressures from the labor market are primary explanations. As measured by the consumer price index (CPI), the inflation rate is projected to fall slightly to 1.4 percent in 2014, down from 1.5 percent in 2013. Falling energy prices explain a large part the recent pattern of low inflation. Core-CPI, which excludes food and energy products, is expected to rise by close to 2 percent in 2014. Consumer energy prices fell by 0.7 percent in 2013 and they are projected to fall by another 2.0 percent in 2014 and 0.4 percent in 2015.

Figure 1.9. Inflation Will Remain Subdued in Part Because of Falling Energy Prices



Source: IHS Global Insight, Inc.

1.4. Alternatives Scenarios

The passage of the Bipartisan Budget Act of 2013 brought a much-needed sense of optimism to U.S. consumers and businesses. The risks of another government shutdown are now negligible. However, there are still uncertainties regarding how the debt-ceiling issue will be handled by Washington and whether further fiscal contractions will come to play as the economy continues to show strength. In addition, the uncertainty surrounding growth prospects in Europe and emerging markets will affect U.S. exports.

In the pessimistic scenario (20 percent probability), a combination of domestic and global factors halts the momentum of the recovery and the economy barely avoids a recession, with only 0.9 percent overall growth. Excessive fiscal tightening is the main domestic factor that could slow or derail growth in 2014. Sharp federal spending cuts could be the result of another deadlocked debt-ceiling crisis or misinterpretation by policymakers that the economy is fully back on track. In Europe, sovereign-debt issues reemerge and austerity responses by the European Union Commission contributes to push the

continent back into recession. With weaker growth in emerging market countries and a recession in Europe, U.S. exports contract and growth prospects are cut even further. Consumer and business confidence takes a hit and the unemployment rate rises back up to 7.5 percent. Stock prices plunge and the housing sector falls back.

In the optimistic scenario (20 percent probability), Washington builds on the bipartisan momentum following the passage of the budget agreement and the debt ceiling is raised in a timely fashion without drama. With fiscal uncertainties effectively out of the equation, both consumer and business confidence rises, unleashing spending and hiring. The unemployment rate falls below the 6.5 percent mark by the end of the first quarter. The recovery in the housing sector shifts gears as housing starts top 1.5 million in the last quarter (annual rate). U.S. exports accelerate as well, as European policymakers find the right prescriptions to deal with sovereign debt issues and avoid deflation in the Eurozone.

1.5. Forecast Summary and Conclusions

- Inflation-adjusted GDP will grow by a solid 2.7 percent in 2014, following modest 1.9 percent growth in 2013.
- The unemployment rate will continue to fall steadily to reach 6.2 percent by the end of 2014; the economy will add on average 194 thousand jobs monthly.
- Consumer spending growth will accelerate to 2.8 percent in 2014 as a falling unemployment rate, rallying equity markets and rising home prices combine to boost confidence.
- The recovery of the housing market will carry on and residential fixed investment will grow by double digits for the third straight year.
- Exports and imports will grow at approximately the same rate (4.6 percent) and the trade deficit will be close to 2.7 percent of GDP.
- Inflation will remain low, near 1.4 percent, due in large part to falling energy prices.
- The Fed will complete the tapering of its long-run asset purchase programs by the end of 2014, but it will keep its targeted federal funds rate low until mid-2015.

1.5. Forecast Summary and Conclusions, continued

The Bitcoin Boom: From Math and Hacks to a Potential Gold Standard Currency

What is bitcoin? Bitcoin is a virtual digital currency with no central bank or authority that controls it. It is essentially a secret number that is transferred from one party to another. Unlike regular currencies, bitcoins are not issued by any central bank. Instead, they can be “mined” by anyone using computer software to decrypt a special key. A new bitcoin is generated and attributed to the miner or group of miners who found the key. The difficulty of “mining” is set to increase automatically as computing power increases, such that bitcoins are generated at the preset pace. Bitcoins are stored in digital wallets, which are similar to personal online banks.

It all started in 2008 when programmer Satoshi Nakamoto released a white paper entitled “Bitcoin: A Peer-to-Peer Electronic Cash System” in which he describes a payment network and digital currency with no central authority or bank. The implementation of the bitcoin system began in 2009 but the popularity of the digital currency only took off in 2013 when it significantly appreciated against the dollar and other regular currencies. Up to 2012, the exchange value of a bitcoin fluctuated from a few cents to a few dollars. In 2013, it skyrocketed from \$13 at the beginning of the year to more than \$1200 in early December, surpassing the price of gold.

Bitcoins can be easily purchased from one of the numerous online exchanges in virtually any country. A growing number of online vendors now accept payments in bitcoins. However, bitcoin payments are not widespread and many acquire bitcoins just for speculative purposes.

Many features of the bitcoin system make it attractive compared to regular currencies. First, inflation as we know it is not an issue for the bitcoin. It cannot lose value due to overprinting. Not only does no central authority print bitcoins, the total possible amount of bitcoins is finite. There are 21,000,000 possible bitcoins, of which almost 12,000,000 are already mined and in circulation. The cap is expected to be reached sometime in 2140. Second, because there is no central authority involved, owners of bitcoin wallets are protected against all type of monetary policy actions and seizure. This is a particularly attractive feature for people engaged in illicit activities. The same goes for privacy issues. There are no intermediaries such as banks or credit card processing companies involved in a bitcoin payment. The buyer pays the seller directly and identities are kept private between the two parties. In addition, sellers are happy that all transactions are final. There is no such thing as a chargeback when a buyer pays with bitcoins. For a refund, the payee must agree to initiate a different transaction. In addition, there is little to no transaction fee and the system is accessible to virtually anyone with internet access. If you can receive and send emails, you can use bitcoins. Users can transfer money across the globe in minutes and pay close to nothing in fees.

continued on page 18

Although the Currency is Totally Virtual (No Actual Bitcoin Bills or Coins Exist), Many Concept Tokens Have Emerged and Typically Feature the Bitcoin Symbol on Gold-Plated Coins



1.5. Forecast Summary and Conclusions, continued

The Bitcoin Boom: From Math and Hacks to a Potential Gold Standard Currency (continued)

Despite its attractive features, there are many issues associated with the bitcoin system and its use as a method of payment by the mainstream. The first set of issues is related to the lack of regulation. Because all transactions are conducted in total privacy with no intermediaries and/or government oversight, bitcoins can easily be used to finance illegal and criminal activities without leaving any trace. Likewise, bitcoin transactions are effectively tax-free. The whole system is subject to manipulation and malware attacks that could result in people losing their fortune without any authority to turn to. As it is currently implemented, the bitcoin system is such that a person could lose his entire fortune if he loses the passcode to his wallet and has no backup. Unlike a regular bank account, there is no one to turn to for identification and access when the passcode is lost. Besides, the current high volatility of the currency makes it too risky for anyone to consider keeping a significant portion of their wealth in the form of bitcoins.

Given the recent surge in popularity of the bitcoin, central banks and governments around the world are responding with mixed messages. At a Senate committee hearing in November 2013, the U.S. Department of Justice recognized that bitcoins can be legal methods of payment. The Chairman of the Federal Reserve, Ben Bernanke, went even further in his letter to the Senate committee. He acknowledged that, while virtual currencies pose money laundering and other risks, there are also areas where they may hold long-term promise.

The official reception of the bitcoin was less warm outside of the U.S. The European Banking Authority (EBA) issued a report in December 2013 warning consumers that any investment in bitcoins could become worthless. The EBA reminded European consumers that digital currencies are completely unregulated and based on platforms that could collapse. Chinese authorities went further. The Chinese central bank along with four other government authorities issued a joint statement in December banning Chinese financial institutions from dealing in bitcoins. Later in the month, the value of the virtual currency sunk after the biggest Chinese bitcoin exchange announced it would no longer accept bitcoins.

As of January 12, 2014, bitcoin was trading for \$962. With its high volatility and many diverging signals coming from governments around the world, it is hard to predict whether the bitcoin will one day become the new “gold standard” for international payments or just fade away as more and more governments discourage or prohibit its use.

CHAPTER 2: THE TENNESSEE ECONOMY: SHORT-TERM OUTLOOK

In this chapter—

2.1. Introduction

2.2. The Current Economic Environment

2.3. Fiscal Update

National Perspective

Tennessee and Southeastern States' Tax Revenues

Franchise and Excise Tax Collections

2.4. Short-Term Outlook

Tennessee Forecast at a Glance

2.5. Situation and Outlook for Tennessee Agriculture

Overview of Agriculture in Tennessee

Tennessee Agricultural Sector Outlook

Ag Sector Issues

2.1. Introduction

It has been more than four years since the end of the Great Recession, and by most accounts Tennessee and the nation have both continued along the paths of economic recovery in 2013. In Tennessee, inflation-adjusted gross domestic product (GDP) grew by 2.6 percent in 2013 and is expected to grow an additional 2.8 percent in 2014. In comparison, U.S. GDP (inflation adjusted) expanded by 1.9 percent in 2013, and is projected to rise by 2.7 percent in 2014.

In the U.S. there were 2.2 million jobs created in 2013, matching job growth from 2012 and outpacing employment gains from 2011. Signs of a strengthening labor market can also be seen in the state economy. In Tennessee, nonfarm employment grew by 1.5 percent in 2013, representing an addition of over 40,000 jobs. Manufacturing employment also expanded by 2.2 percent in Tennessee compared to only 0.5 percent across the nation.

After adjusting for inflation, personal income grew by 1.5 percent in the state and 1.7 percent in the nation. Nominal taxable sales in Tennessee increased at a rate of 2.8 percent in 2013. This followed a 4.8 percent gain in taxable sales in 2012. For nonfarm employees, the average annual wage in Tennessee was \$45,176, representing a 1.4 percent increase over the previous year. Unfortunately however, the unemployment rate did increase slightly in 2013, from 8.0 percent in 2012 to 8.2 percent in 2013. This occurred despite a contraction in the national unemployment rate.

The final month of 2013 was accompanied by encouraging news out of Washington, DC. A new federal budget deal, the Bipartisan Budget Act, was passed in December and dramatically reduced the possibility of another government shutdown, at least for the next two years. Furthermore, the Federal Reserve began tapering its quantitative easing program by reducing monthly bond

2.1. Introduction, continued

purchases from \$85 million to \$75 million. Both of these actions can be viewed as positives for the nation. The budget deal should instill some confidence to investors, or at least reduce uncertainty. The tapering of quantitative easing conveys an optimistic outlook by the Fed, as they have consistently asserted that they would continue their aggressive bond buying strategy until the economy improved markedly.

These events will provide some momentum for the nation's economic recovery. Signs of this

momentum can be found at the state level where the short-term outlook for Tennessee calls for slightly faster growth in 2014 than in 2013. The unemployment rate is expected to drop from 8.2 percent in 2013 to 7.5 percent in 2014, and inflation-adjusted personal income will grow by 2.9 percent. Modest job growth is also expected, as nonfarm employment and manufacturing employment will expand by 1.5 percent and 1.0 percent respectively in 2014.

2.2. The Current Economic Environment

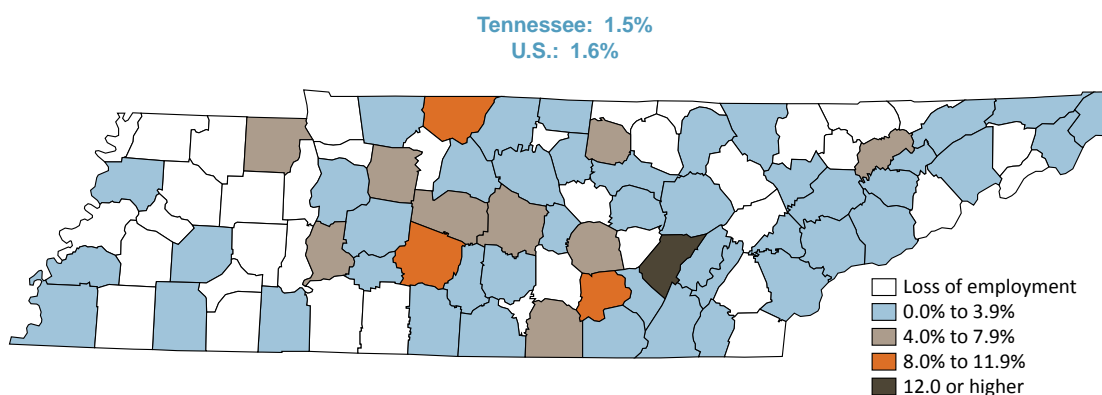
Year-over-year nonfarm employment growth in Tennessee slowed in each quarter of 2013 with the fourth quarter exhibiting growth of only 1.1 percent (compared to 1.8 percent growth in the fourth quarter of 2012.) For the year, Tennessee nonfarm employment totaled 2,755,308. This is slightly below the pre-recession peak of 2,797,779 in 2007, but higher than employment levels in 2000 for the first time since the end of the recession.

In 2013, annual employment growth in Tennessee was led by leisure and hospitality services (4.3 percent), professional and business services (3.6 percent), and durable goods

manufacturing (3.3 percent). Five broad sectors experienced employment contractions in 2013, including the natural resources, mining, and construction sector, wholesale trade, information, state and local government, and the federal government. Employment losses were largest in the federal government which experienced a 7.0 percent contraction. Much of this can be attributed to the sequestration of federal government spending.

County employment growth data for the second quarter of 2013 (the most recent data available) are presented in Figure 2.1. There were 38 counties

Figure 2.1. Many Counties Throughout the State Observe Negative Job Growth
(Year-Over-Year Growth in Total Covered Employment, June 2012 - June 2013)



Note: Not seasonally adjusted.

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

2.2. The Current Economic Environment, continued

in the state that reported negative employment growth from June 2012 to June 2013. In contrast, only 25 counties saw employment fall in the second quarter of 2012 (between June 2011 and June 2012.) Henderson County and Union County, both of which have very small employment bases, were the only counties to experience employment losses in excess of 7.0 percent (7.6 percent and 7.9 percent respectively). Bledsoe County, which also has a small employment base, experienced the strongest growth at 16.0 percent, followed by Grundy County (11.9 percent), Robertson County (10.3 percent), and Maury County (8.1 percent). By comparison, county employment growth in 2012 was far more pronounced. In 2012 for example, Lake County experienced employment growth of 63.4 percent and four other counties (Morgan, Bledsoe, Moore, and Lauderdale) all saw gains exceeding 20.0 percent.

The civilian labor force in Tennessee, which includes unemployed people who are actively seeking employment and employed individuals, increased slightly (0.2 percent) in 2013. However, the number of employed persons decreased slightly over the year (0.1 percent) while the number unemployed increased by 2.6 percent. An increase in the labor force coupled with a rise in the number of unemployed persons indicates that more individuals are actively seeking employment (i.e. are counted in the labor force) but have yet to find a job (i.e. are unemployed). This group is comprised of job losers who are actively seeking new employment, previously discouraged workers who are now seeking employment again, and new entrants into the labor force (e.g. recent graduates). The labor force participation rate (i.e. the percentage of the adult population in the labor force) declined by 1.0 percent in 2013. This marks two consecutive years where the labor force participation rate fell by 1.0 percentage point or more. For the nation, the labor market in 2013 was slightly more positive. The labor force increased slightly (0.3 percent), the number of employed people expanded by 1.0 percent while the number of unemployed people fell by 7.6 percent.

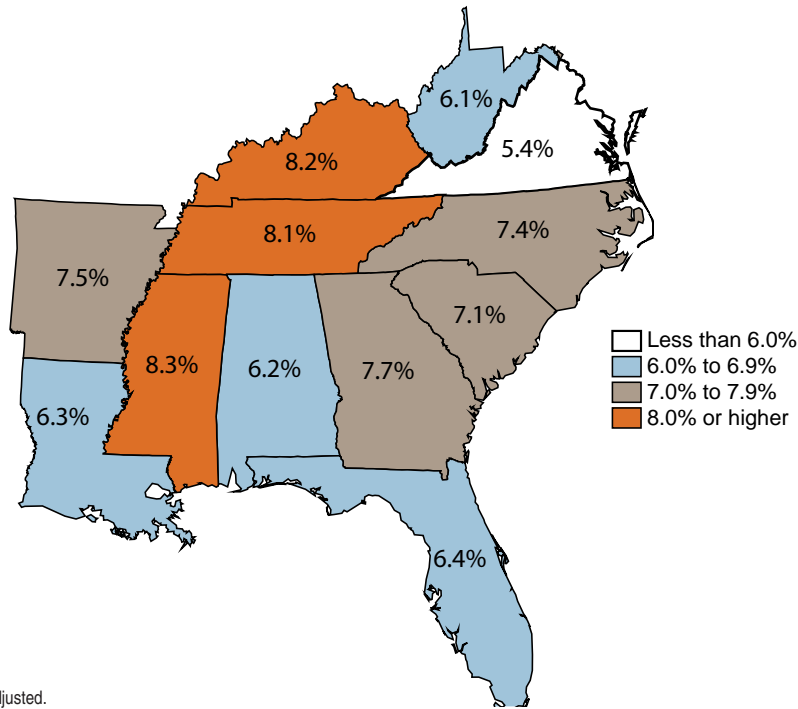
The state's unemployment rate averaged 8.2 percent in 2013 compared to 7.4 percent for the nation. From 2012 to 2013, Tennessee's unemployment rate increased slightly (0.2 percentage points) while the national unemployment rate fell by a significant 0.7 percentage points. Using unemployment data from the month of November (the most recent data available), Figure 2.2 presents seasonally adjusted unemployment rates for the southeast states – Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. At 8.1 percent, Tennessee had the third-highest monthly unemployment rate among all southeastern states, only behind Mississippi at 8.3 percent and Kentucky at 8.2. The lowest monthly unemployment rate was in Virginia (5.4 percent). Among all states (including Washington, DC), Tennessee had the ninth-highest unemployment rate in the country, while North Dakota had the lowest (2.6 percent).

Figure 2.3 displays non-seasonally adjusted county unemployment rates for November 2013. There were 21 counties to report non-seasonally adjusted unemployment rates of 10.0 percent or greater. Scott County had the highest unemployment rate at 15.7 percent; this is slightly below the unemployment rate of 16.1 percent reported in Scott County in November 2012. Williamson County had the lowest unemployment rate at 5.0 percent, followed by Lincoln County (5.2 percent), Wilson County (5.4 percent), Cheatham County (5.5 percent), and Rutherford County (5.6 percent). From November 2012 to November 2013, there were 5 counties to experience falling unemployment rates in excess of 1.0 percentage point (Van Buren, White, Marshall, Warren, and Obion), and 3 counties which saw unemployment rates increase by more than 1 percentage point (Shelby, Sequatchie, and McNairy).

In 2013 nominal personal income in Tennessee increased by 2.7 percent, which was on pace with the 2.9 percent increase across the nation. Tennessee proprietors' income increased by 5.5

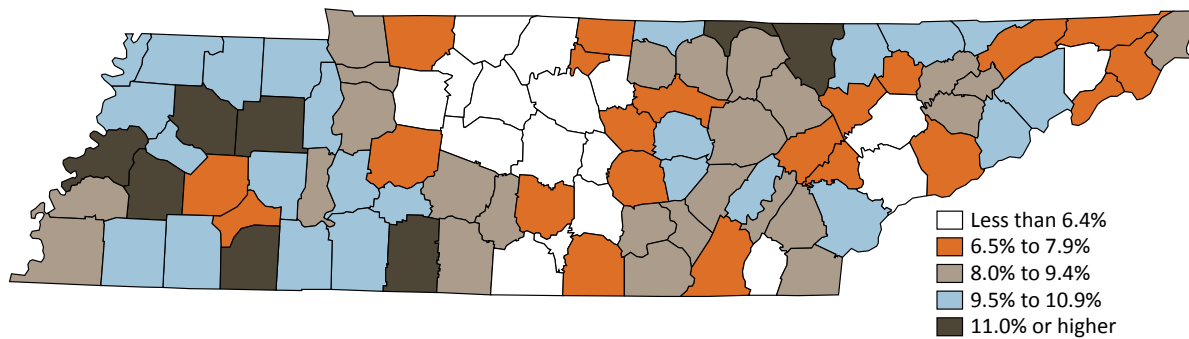
2.2. The Current Economic Environment, continued

Figure 2.2. Tennessee's Monthly Unemployment Rate among the Highest of the Southeastern States
(November 2013)
U.S.: 7.0%



Note: Seasonally adjusted.
Source: Bureau of Labor Statistics.

Figure 2.3. Unemployment Rate, November 2013
Tennessee: 7.4% NSA (8.1% SA)
U.S.: 6.6% NSA (7.0% SA)



County unemployment rate data is not seasonally adjusted.
Source: Bureau of Labor Statistics.

2.2. The Current Economic Environment, continued

percent over the year, and rent, interest, and dividend income expanded by 4.0 percent. Wages and salaries were up 2.9 percent, and transfer payments increased by 3.8 percent. Inflation-adjusted personal income per capita reached \$36,706 in 2013. This represents a 0.5 percent increase over 2012.

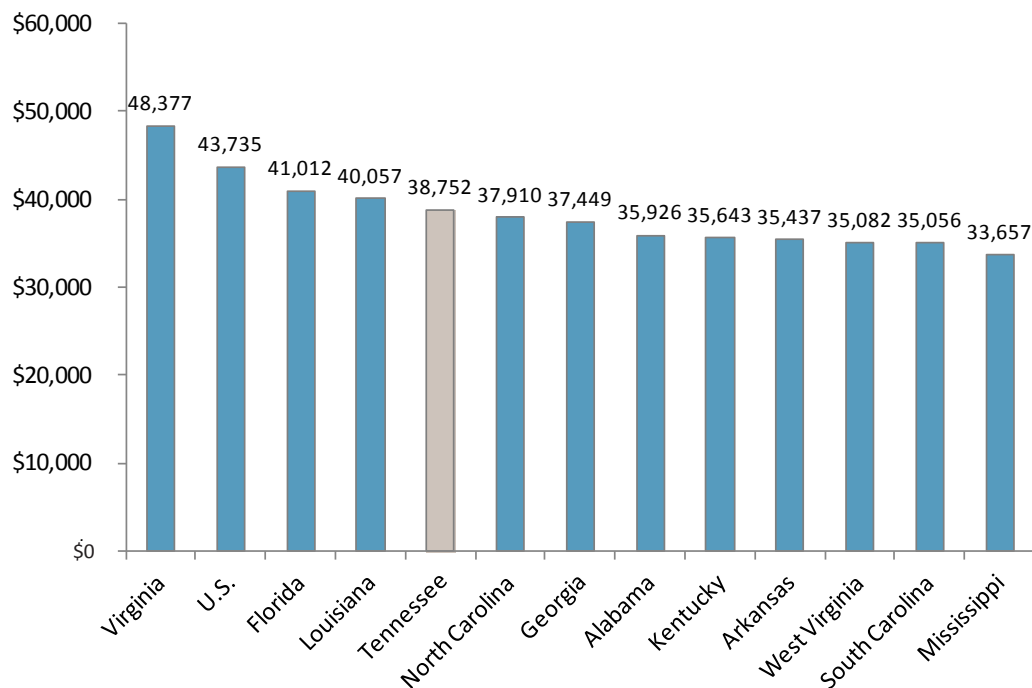
Figure 2.4 shows per capita personal income in current dollars across the southeast states for 2012, the most recent year for which the data are available. Tennessee ranked fourth among all twelve southeast states at \$38,752 which is slightly above the regional average (\$37,863) but below the national average (\$43,735). Among the southeast states, per capita income is highest in Virginia (\$48,377) and lowest in Mississippi (\$33,657).

Figure 2.5 reports county-level per capita personal income data in Tennessee for 2012 (the most recent data available.) Williamson County had the highest per capita income in the state at

\$66,195. High income per-capita in Williamson County was mainly driven by two sources. First, wages and salaries paid in the county totaled \$5.9 million in 2012. This was the fifth highest in the state only behind Davidson, Hamilton, Knox, and Shelby Counties. Second, with a total population of roughly 193,000 people, Williamson County was far less populated than these other four counties, leading to higher per-capita personal income (i.e. personal income divided by population). In 2012 there were only three Tennessee counties with an average income above the national average of \$43,735 (Williamson, Davidson, and Fayette). Per capita personal income was lowest in Hancock County at \$21,287. Hancock County was also the fourth smallest county in the state with a population of 6,720 people in 2012.

Taxable sales growth is beginning to slow, growing by only 2.8 percent in calendar year 2013 as compared to 4.7 percent in 2012 and 5.9 percent

Figure 2.4. Tennessee Has the Fourth Highest Per Capita Personal Income (in Current Dollars) among Southeast States, 2012

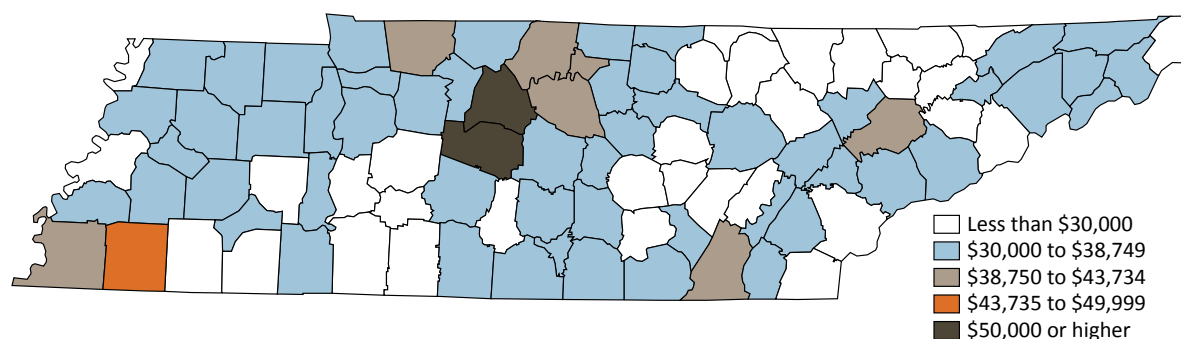


Source: Bureau of Economic Analysis.

2.2. The Current Economic Environment, continued

Figure 2.5. Per Capita Income Shows Wide Variation across Tennessee
(2012 Per Capita Personal Income in Current Dollars)

Tennessee: \$38,752
U.S.: \$43,735



Source: Bureau of Economic Analysis.

in 2011. Light vehicle sales continue to grow (up 5.8 percent in 2013) though at a slower pace than the previous three years. Despite this slower growth, light vehicle sales have finally surpassed pre-recession peak levels of 2007. Conversely, sales in transportation and communication have contracted for the second consecutive year and

are still a good deal below pre-recession levels. Following two strong years of taxable sales growth in the hotels and motels sector, sales tapered off in 2013, only expanding by 0.8 percent. Taxable sales in all other broad sectors (aside from transportation and communication) expanded in 2013 but at a slower rate than in 2012.

2.3. Fiscal Update

National Perspective

In fiscal year (FY) 2013 (August 2012 – July 2013), states collected a total of \$842.6 billion in tax revenues, which is up 6.7 percent from FY 2012. Compared to 2008, tax collections are up 8.4 percent. It took five years since the beginning of the Great Recession, but in the second quarter of FY 2013, inflation-adjusted state tax revenues finally exceeded peak prerecession levels of FY 2008.¹ Aggregate state sales tax collections were up 3.9 percent in FY 2013 versus FY 2012. Corporate income tax collections were up 8.7 percent and personal income tax revenues expanded by 13.8 percent.

Through the third quarter of calendar year 2013, July through September, total state tax collections

¹Dadayan, Lucy and Donald J. Boyd. (December 2013). "Strong Growth in the First Half; Softening Growth Outlook for the Rest of 2013." The Nelson A. Rockefeller Institute of Government. Retrieved from http://www.rockinst.org/pdf/government_finance/state_revenue_report/2013-12-10-SRR_93.pdf

have now grown for fourteen consecutive quarters. However, preliminary data indicate that growth in the third quarter has dampened significantly. This is particularly true for personal income tax revenues which showed strong growth of 18.4 percent in the second quarter of 2013 but only 5.3 percent growth in the third quarter. This is likely due, in part, to scheduled increases in federal income tax rates in 2013 which caused many higher income earners to "accelerate" their realizations of capital gains income from later years to 2012 in order to minimize their future tax liabilities. As a result we saw robust growth in personal income collections in the last quarter of 2012 and the first two quarters of 2013.² Finally, state general fund revenues were up 5.7 percent in FY 2013. After

²Dadayan, Lucy and Donald J. Boyd. (April 2013). "States Are Not Out of the Woods Despite Strong Revenue Gains in the Fourth Quarter." The Nelson A. Rockefeller Institute of Government. Retrieved from http://www.rockinst.org/newsroom/revenue_reports/2013/2013-04-24-SRR_91.pdf

2.3. Fiscal Update, continued

adjusting for inflation this is still 5.6 percent below the prerecession peak level of \$747 billion in FY 2008.³

Tennessee and Southeastern States Tax Revenues

For the fiscal year, total tax revenues in the Southeast region (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia) increased by 5.2 percent over FY 2012. Sales tax collections were up 3.4 percent, corporate income tax revenues increased by 8.6 percent, and personal income tax collections experienced 8.8 percent growth. Comparing the second quarter of 2013 to the same quarter in 2012, total tax revenues in the Southeast region increased by 5.7 percent. Sales tax collections expanded by 3.6 percent, corporate income tax collections were up 3.2 percent, and personal income tax revenues increased by 9.0 percent. In the Southeastern states, property taxes increased by 2.7 percent from 2011 to 2012. Conversely, across the nation property tax revenues fell by 8.0 percent due to lingering effects of the recession.⁴

In Tennessee, tax revenues continue to grow, but at a slower rate than the Southeast region as a whole. Total tax revenues in Tennessee grew by 3.3 percent in FY 2013, while sales tax collections were only up 1.8 percent (according to Tennessee Department of Revenue collections.) Both revenue categories grew more slowly than was the case in the majority of other states in the region.⁵

December collections in Tennessee totaled \$966.6 million, corresponding to a 1.6 percent contraction over December 2012. Sales and use tax collections were up 2.5 percent from December of last year. Business tax collections were 20.5 percent above last December, while inheritance

and estate collections were up 67.5 percent and gasoline tax collections expanded by 16.8 percent. Franchise and excise (F&E) tax collections were down 17.9 percent compared to last December and Hall income tax collections contracted by 63.4 percent.

In Tennessee, fiscal year-to-date (August 2013 – December 2013) collections are growing, but at a slower-than-expected pace. Total collections are 0.5 percent higher than last year-to-date, but 3.7 percent under expectations. Slow growth has mainly been driven by the volatile and seemingly underperforming franchise and excise (F&E) tax collections which have shrunk by 13.7 percent compared to last fiscal year-to-date, and are 21.3 percent below expectations. However, it is still too early to tell how total F&E collections will turn out for the fiscal year as April has historically been the most important month for firms to reconcile their tax liabilities.

Franchise and Excise Tax Collections

Franchise and excise (F&E) taxes are privilege taxes levied on corporations, limited partnerships, limited liability companies, and business trusts organized in Tennessee or doing business in Tennessee. The franchise tax levies \$0.25 per \$100 of a company's net worth while the excise tax levies 6.5 percent of net earnings of all profitable business conducted in the state. Generally speaking, the franchise tax is akin to a property tax on businesses while the excise tax is a tax on corporate profit. However, F&E collections and business conditions do not always move in the same direction. For example, 2013 was the best year for the stock market in the 21st century, as the Dow Jones, S&P 500, and NASDAQ all grew by over 25 percent. Similarly, through the first half of FY 2014 (August 2013 – January 2014) the Dow, S&P 500, and NASDAQ have all grown by at least 10.0 percent. Despite these strong gains in the stock market, F&E payments for the year are actually down compared to last fiscal year.

While F&E taxes are broadly tied to corporate profit and economic conditions, low F&E payments do not necessarily mean that businesses

³The National Association of State Budget Officers (December 10, 2013). "Summary: Fall 2013 Fiscal Survey of States." Retrieved from http://www.nasbo.org/sites/default/files/Summary_Fall%202013%20Fiscal%20Survey%20of%20States_0.pdf

⁴Data retrieved from "State Government Tax Collections," U.S. Census Bureau. <http://www.census.gov/govs/statetax/>

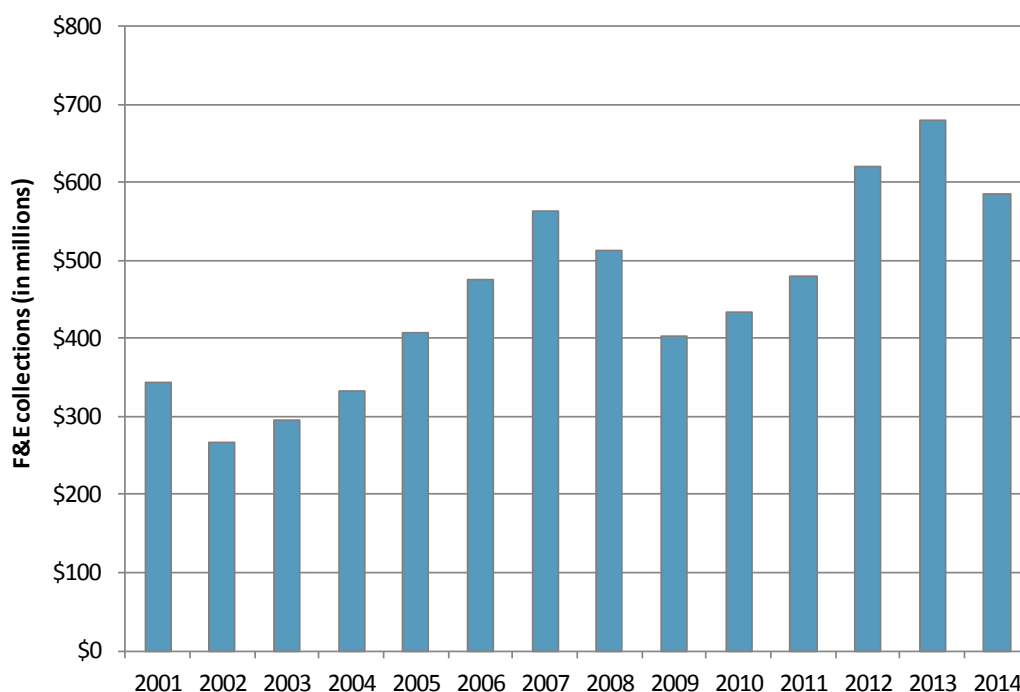
⁵Dadayan, Lucy and Donald J. Boyd. (December 2013). "Strong Growth in the First Half; Softening Growth Outlook for the Rest of 2013." The Nelson A. Rockefeller Institute of Government. Retrieved from http://www.rockinst.org/pdf/government_finance/state_revenue_report/2013-12-10-SRR_93.pdf

2.3. Fiscal Update, continued

within the state are performing poorly; rather it may be a byproduct of the F&E tax payment structure. In Tennessee, the annual F&E payments are due in April but rather than making one annual payment, businesses generally estimate their annual F&E liability and then make quarterly (estimated) payments throughout the year. (The first quarterly payment of the fiscal year comes in during the month of September, followed by January, April, and then June.) It is certainly possible for a business to overestimate and consequently overpay their F&E liability for the fiscal year, in which case they would receive a refund the following fiscal year. This is possibly one of the factors contributing to falling F&E payments in FY 2014 compared to the previous year.

Looking at the data, Tennessee collected over \$2.0 billion in F&E payments during FY 2013. This was the first time that F&E payments had ever reached \$2.0 billion, and this was nearly 9.0 percent larger than the previous record high (\$1.86 billion in FY 2012.) So far, in FY 2014 the state has collected \$586.2 million in F&E payments. This is well below the fiscal year-to-date (August through December) F&E collections of \$679.3 million in FY 2013 and \$619.8 million in FY 2012, but compared to year-to-date collections from FY 2011, F&E payments have actually expanded by 22.2 percent. Furthermore, fiscal year-to-date F&E collections are 4.0 percent higher than pre-recession peak levels of FY 2007. Figure 2.6 presents the fiscal year-to-date (August through

Figure 2.6. Tennessee Franchise and Excise Tax Collections, Fiscal Year-To-Date (August – December) Peaked in FY 2013



Source: Tennessee Department of Revenue.

2.3. Fiscal Update, continued

December) F&E collections in recent history. While the F&E payments may seem to be putting a drag on state revenues, they are actually higher than year-to-date collections of years past, except for the last two years which may have been outliers.

So far there has only been one quarterly payment (September's) made in FY 2014 of \$277

million. From a historical perspective, this year's September collection (September 2013) was actually the third highest in the 21st century (only behind September 2009 and September 2012). However, the highest September collection of the 21st century was last fiscal year, making this year's payment seem small from a relative standpoint.

2.4. Short-Term Outlook

A summary of the projected short-term economic outlook for Tennessee and the nation is presented in Table 2.1. As discussed in Chapter 1 and the introduction to this chapter, some encouraging news came out of Washington, DC at the end of calendar year 2013 which should help facilitate growth in 2014. First, uncertainties with regards to the federal budget have waned with the signing of the Bipartisan Budget Act, which reduces the possibility of another government shutdown, at least for the next two years. This should hopefully instill some confidence to investors, or at least reduce uncertainty. Second, in December 2013 the Federal Reserve began tapering its quantitative easing program by reducing monthly bond purchasing from \$85 million to \$75 million. Tapering conveys an optimistic outlook by the Fed as they have consistently asserted that they would continue their quantitative easing strategy until the economy gained a stronger footing. It is expected that the Fed will gradually taper throughout 2014 and complete the process at the end of the calendar year. This will likely put some upward pressure on interest rates, especially longer-term rates; the Fed has repeatedly announced that they will continue to keep short-term interest rates near zero. Thus, we believe that interest rates will rise within the year, but at a very gradual pace. Higher interest rates will be a welcoming sight for retirees and other savers, but will be costly for borrowers. Other engines of growth in 2014 include an improving global economy and sustained recovery in the housing sector.

For the state, nominal personal income is forecasted to increase by 4.2 percent in 2014 followed by 4.5 percent growth in 2015. Among all personal income categories, rent, interest, and dividend income will expand by the largest amount in 2014, increasing by 5.5 percent, followed by 5.2 percent growth in 2015. Proprietors' income will experience robust growth of 5.2 percent in 2014 and 6.1 percent in 2015, and wages and salaries will also enjoy solid growth in the near term. The national economy is expected to see nominal personal income grow by 4.6 percent in 2014 and 5.0 percent in 2015. Per capita personal income will increase by 3.1 percent in 2014 followed by 3.4 percent growth in 2015. Compared to the nation however, Tennessee's per capita personal income will only be 87.5 percent of the U.S. average in 2014 as opposed to 90.7 percent ten years prior in 2004. On a fiscal year basis, nominal personal income is expected to increase by 3.3 percent in FY 2014 and 4.5 percent in FY 2015.

Seasonally-adjusted nonfarm job growth is expected to be 1.5 percent in 2014 followed by slightly stronger 1.8 percent growth in 2015. For the nation, nonfarm job growth is expected to grow at a similar albeit slightly faster pace. Growth in Tennessee's nonfarm employment will be driven by relatively strong expansions of Tennessee's leisure and hospitality workforce as well as employment in professional and business services. However, overall growth will be slightly dampened by an expected 5.2 percent contraction in federal government jobs in 2014, followed by an additional 1.0 percent contraction of federal jobs in 2015.

continued on page 30

2.4. Short-Term Outlook, continued

Table 2.1. Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

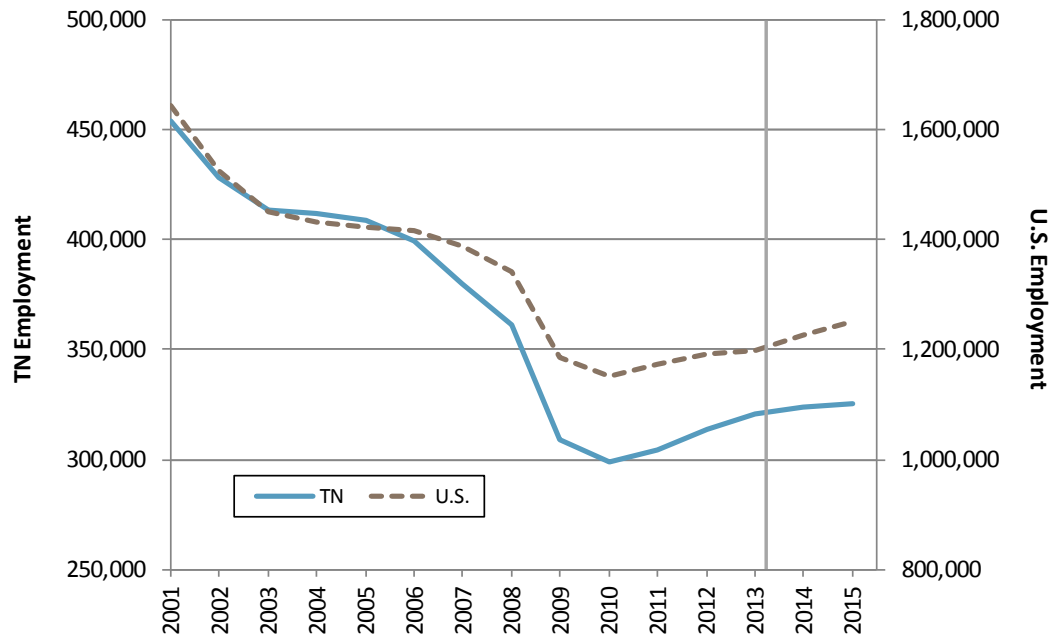
	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
US GDP (Bil2009\$) SAAR.....	15679.7	15839.3	15942.3	16022.4	16120.5	16228.2	16360.4	16495.2	16635.5	16781.4	16921.9	17055.7	15470.7	15761.3	16182.8	16708.5
% Chg Prev Qtr SAAR.....	2.48	4.13	2.63	2.02	2.47	2.70	3.30	3.34	3.45	3.55	3.39	3.20	2.78	1.88	2.67	3.25
% Chg Same Qtr Last Yr.....	1.63	1.97	2.59	2.81	2.81	2.45	2.62	2.95	3.20	3.41	3.43	3.40	2.78	1.88	2.67	3.25
US GDP (Bil\$) SAAR.....	16661.0	16912.9	17060.0	17213.8	17408.6	17599.7	17809.5	18036.5	18258.5	18490.3	18716.4	18959.7	16244.6	16792.3	17507.9	18375.4
% Chg Prev Qtr SAAR.....	3.08	6.19	3.52	3.66	4.60	4.46	4.85	5.20	5.01	5.18	4.98	5.30	4.58	3.37	4.26	4.96
% Chg Same Qtr Last Yr.....	3.10	3.40	3.90	4.10	4.49	4.06	4.39	4.78	4.88	5.06	5.09	5.12	4.58	3.37	4.26	4.96
TN PERSONAL INCOME (MIL2009\$) SAAR.....	239467	240081	242035	243734	245548	247361	249213	250821	252668	254347	256024	257359	236000	239587	246464	253465
% Chg Prev Qtr SAAR.....	4.64	1.03	3.30	2.84	3.01	2.99	3.03	2.61	2.98	2.68	2.66	2.10	3.38	1.52	2.87	2.84
% Chg Same Qtr Last Yr.....	1.67	2.26	1.07	2.94	2.54	3.03	2.97	2.91	2.90	2.82	2.73	2.61	3.38	1.52	2.87	2.84
US PERSONAL INCOME (BIL2009\$) SAAR.....	13180	13248	13308	13470	13576	13699	13813	13962	14073	14177	14286	14448	12964	13190	13640	14125
% Chg Prev Qtr SAAR.....	4.81	2.08	1.84	4.96	3.19	3.67	3.37	4.38	3.20	2.99	3.12	4.60	2.30	1.74	3.41	3.55
% Chg Same Qtr Last Yr.....	2.09	2.67	0.83	3.41	3.01	3.41	3.80	3.65	3.66	3.48	3.42	3.48	2.30	1.74	3.41	3.55
TN PERSONAL INCOME (MIL\$) SAAR.....	255937	257825	260369	263071	266126	269105	272078	274929	278030	281073	284138	287019	250189	256814	267595	279543
% Chg Prev Qtr SAAR.....	4.52	2.98	4.01	4.22	4.73	4.55	4.49	4.26	4.59	4.45	4.43	4.12	5.29	2.65	4.20	4.46
% Chg Same Qtr Last Yr.....	2.76	3.41	1.98	3.93	3.98	4.37	4.50	4.51	4.47	4.45	4.43	4.40	5.29	2.65	4.20	4.46
US PERSONAL INCOME (BIL\$) SAAR.....	14086	14226	14314	14521	14695	14877	15049	15266	15438	15611	15794	16045	13744	14138	14786	15527
% Chg Prev Qtr SAAR.....	4.68	4.04	2.50	5.91	4.86	5.06	4.71	5.89	4.57	4.58	4.77	6.50	4.19	2.87	4.58	5.02
% Chg Same Qtr Last Yr.....	3.18	3.83	1.71	4.28	4.32	4.58	5.13	5.13	5.05	4.94	4.95	5.10	4.19	2.87	4.58	5.02
TN NONFARM JOBS (THOUS.).....	2758.3	2749.0	2762.2	2775.4	2788.6	2801.5	2815.3	2828.2	2840.4	2852.3	2864.7	2876.1	2715.0	2755.3	2795.2	2846.4
% Chg Prev Qtr SAAR.....	0.97	-1.34	1.92	1.93	1.92	1.86	1.99	1.84	1.74	1.69	1.75	1.60	2.03	1.49	1.45	1.83
% Chg Same Qtr Last Yr.....	1.67	1.21	1.12	0.86	1.10	1.91	1.92	1.90	1.86	1.82	1.76	1.70	2.03	1.49	1.45	1.83
US NONFARM JOBS (MIL.).....	135.7	136.2	136.8	137.3	137.9	138.6	139.2	139.9	140.6	141.3	142.1	142.8	133.7	135.9	138.3	141.0
% Chg Prev Qtr SAAR.....	1.73	1.42	1.78	1.64	1.59	2.12	1.91	2.03	2.01	2.01	2.15	1.93	1.70	1.64	1.71	1.99
% Chg Same Qtr Last Yr.....	1.63	1.68	1.71	1.64	1.61	1.78	1.81	1.91	2.02	1.99	2.05	2.03	1.70	1.64	1.71	1.99
TN MFG JOBS (THOUS.).....	319.7	321.3	321.9	322.6	323.3	323.9	324.4	324.7	325.1	325.3	325.5	325.8	313.5	320.3	323.6	325.1
% Chg Prev Qtr SAAR.....	1.52	2.11	0.66	0.95	0.88	0.75	0.61	0.37	0.38	0.29	0.20	0.37	2.97	2.19	1.02	0.48
% Chg Same Qtr Last Yr.....	1.99	2.03	1.79	1.31	1.15	0.81	0.80	0.65	0.53	0.41	0.31	0.31	2.97	2.19	1.02	0.48
US MFG JOBS (MIL.).....	12.0	12.0	12.0	12.1	12.3	12.4	12.4	12.5	12.5	12.6	12.7	12.7	11.9	12.0	12.3	12.6
% Chg Prev Qtr SAAR.....	-0.26	-0.36	1.76	2.45	5.75	4.65	0.57	2.28	1.56	1.79	2.05	1.53	1.65	0.51	2.56	2.25
% Chg Same Qtr Last Yr.....	0.37	0.16	0.61	0.89	2.38	3.64	3.34	3.29	2.25	1.55	1.92	1.73	1.65	0.51	2.56	2.25
TN UNEMPLOYMENT RATE (%).....	8.3	8.5	8.3	8.0	7.6	7.3	7.2	7.2	7.0	6.9	6.8	6.7	8.0	8.2	7.5	7.0
US UNEMPLOYMENT RATE (%).....	7.6	7.3	7.1	6.8	6.6	6.4	6.2	6.1	5.9	5.8	5.7	5.6	8.1	7.4	6.5	5.9
CHAINED PRICE INDEX, GDP (2009=100.0).....	106.2	106.7	107.0	107.4	108.0	108.5	108.9	109.3	109.8	110.2	110.6	111.2	105.0	106.5	108.2	110.0
% Chg Prev Qtr SAAR.....	0.65	1.97	1.23	1.60	2.08	1.72	1.51	1.80	1.51	1.57	1.54	2.03	1.75	1.39	1.62	1.65
% Chg Same Qtr Last Yr.....	1.35	1.27	1.30	1.36	1.72	1.66	1.73	1.78	1.63	1.60	1.61	1.66	1.75	1.39	1.62	1.65
US PERS CONSUMP DEFL (2009=100.0).....	106.9	107.4	107.6	107.8	108.2	108.6	108.9	109.3	109.7	110.1	110.6	111.1	106.0	107.2	108.4	109.9
% Chg Prev Qtr SAAR.....	-0.12	1.92	0.65	0.90	1.63	1.33	1.30	1.44	1.33	1.55	1.59	1.82	1.85	1.11	1.13	1.41
% Chg Same Qtr Last Yr.....	1.07	1.12	0.88	0.83	1.27	1.13	1.29	1.42	1.35	1.40	1.48	1.57	1.85	1.11	1.13	1.41
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000).....	2.321	2.336	2.341	2.346	2.359	2.369	2.379	2.389	2.399	2.410	2.420	2.433	2.296	2.330	2.363	2.404
% Chg Prev Qtr SAAR.....	-0.03	2.63	0.83	0.91	2.15	1.74	1.72	1.77	1.59	1.80	1.79	2.10	2.08	1.46	1.44	1.75
% Chg Same Qtr Last Yr.....	1.42	1.55	1.21	1.08	1.63	1.41	1.63	1.84	1.70	1.72	1.74	1.82	2.08	1.46	1.44	1.75
BANK PRIME INTEREST RATE (%).....	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.9	4.4	3.3	3.3	3.3	3.4
FEDERAL FUNDS RATE (% per annum).....	0.117	0.083	0.086	0.090	0.090	0.090	0.090	0.093	0.140	0.286	0.892	1.357	0.140	0.107	0.090	0.353
30-YEAR FIXED MORTGAGE RATE (%).....	3.7	4.4	4.3	4.5	4.6	4.7	4.8	4.8	4.9	5.0	5.2	5.5	3.7	4.0	4.6	5.0
TN TAXABLE SALES (MIL2009\$).....	23504	23453	23640	23790	23909	24055	24204	24321	24438	24571	24707	24801	92504	93995	95958	98038
% Chg Prev Qtr SAAR.....	1.81	-0.86	3.23	2.57	2.00	2.48	2.49	1.95	1.94	2.19	2.23	1.53	2.82	1.61	2.09	2.17
% Chg Same Qtr Last Yr.....	2.29	2.53	2.20	1.68	1.72	2.57	2.39	2.23	2.22	2.14	2.08	1.97	2.82	1.61	2.09	2.17
TN TAXABLE SALES (MIL\$).....	25120	25186	25431	25678	25912	26170	26425	26659	26892	27153	27420	27659	98060	100752	104185	108123
% Chg Prev Qtr SAAR.....	1.69	1.06	3.94	3.94	3.70	4.04	3.95	3.59	3.54	3.94	4.00	3.53	4.71	2.75	3.41	3.78
% Chg Same Qtr Last Yr.....	3.38	3.69	3.12	2.65	3.15	3.90	3.91	3.82	3.78	3.76	3.77	3.75	4.71	2.75	3.41	3.78
TN AVG ANNUAL WAGE, NONFARM (2009\$).....	42110	42217	42389	42498	42596	42709	42827	42936	43040	43122	43196	43244	42024	42146	42657	43074
% Chg Prev Qtr SAAR.....	2.34	1.02	1.64	1.03	0.92	1.07	1.11	1.02	0.98	0.77	0.69	0.44	1.56	0.29	1.21	0.98
% Chg Same Qtr Last Yr.....	0.26	1.38	-0.07	1.51	1.15	1.16	1.03	1.03	1.04	0.97	0.86	0.72	1.56	0.29	1.21	0.98
TN AVG ANNUAL WAGE, NONFARM (\$).....	45007	45338	45600	45870	46165	46463	46756	47063	47361	47654	47940	48228	44549	45176	46313	47504
% Chg Prev Qtr SAAR.....	2.23	2.97	2.34	2.39	2.60	2.60	2.55	2.65	2.56	2.50	2.42	2.43	3.44	1.41	2.52	2.57
% Chg Same Qtr Last Yr.....	1.33	2.52	0.82	2.48	2.57	2.48	2.54	2.60	2.59	2.56	2.53	2.48	3.44	1.41	2.52	2.57

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

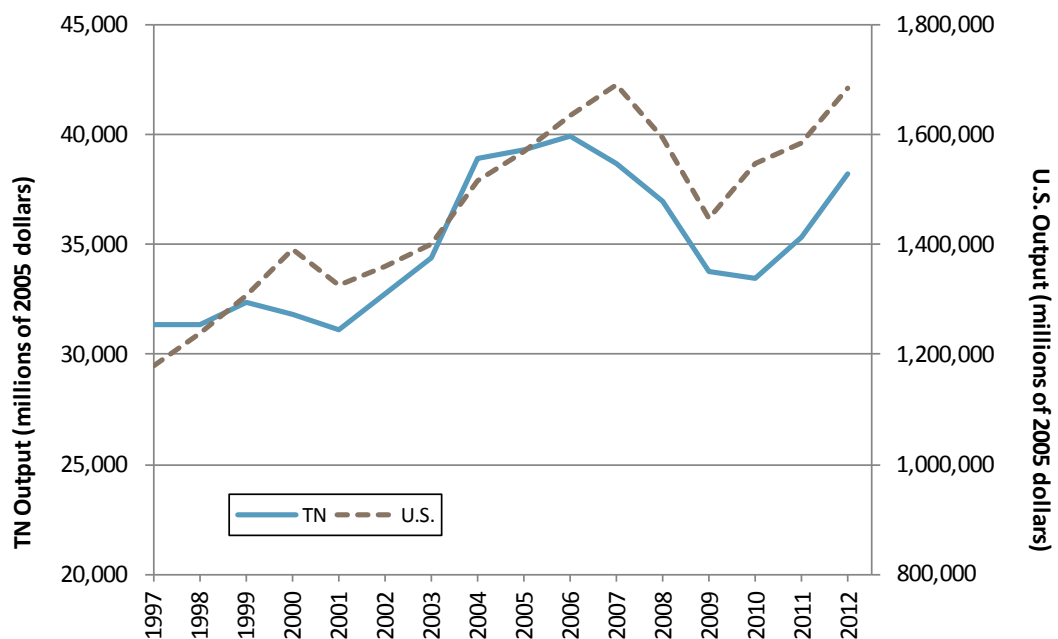
2.4. Short-Term Outlook, continued

Figure 2.7. U.S. and Tennessee Manufacturing Employment Remain Below Pre-Recession Levels from 2008



Source: Bureau of Labor Statistics; IHS Global Insight, Inc.; and CBER-UT.

Figure 2.8. U.S. and Tennessee Manufacturing Output Trend Upward



Source: U.S. Bureau of Economic Analysis.

2.4. Short-Term Outlook, continued

Manufacturing employment growth in Tennessee is expected to taper off beginning in 2014. After exhibiting 2.2 percent job growth in 2013, manufacturing employment is expected to expand by 1.0 percent in 2014 and only 0.5 percent in 2015. Figure 2.7 indicates that manufacturing employment has begun to bounce back since taking a huge hit during the Great Recession. However, manufacturing employment levels are still far below pre-recession levels and there is no expectation of reaching pre-recession employment levels in the foreseeable future. On the bright side, however, manufacturing output has been on the rise in recent years (see Figure 2.8), indicating significant gains in manufacturing productivity (output per worker).

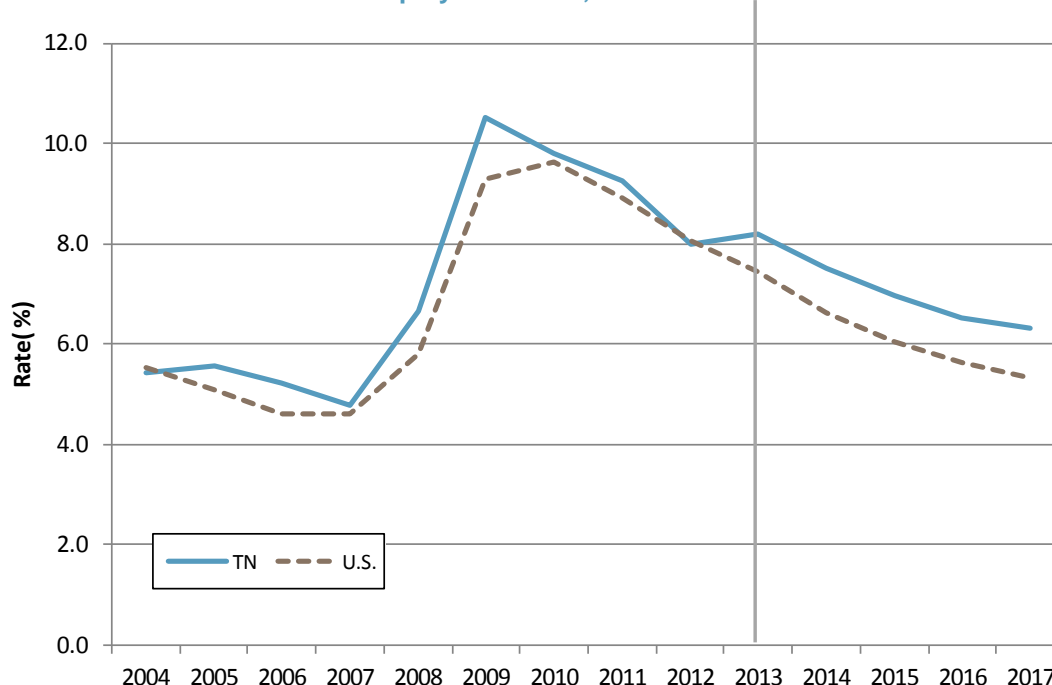
Employment in durable goods manufacturing is projected to rise by 1.8 percent in 2014 and 1.4 percent in 2015. Within durable goods manufacturing, the strongest job growth will be seen in the transportation equipment and

machinery sectors which are both expected to grow by 3.2 percent in 2014 and at least 2.0 percent in 2015. Conversely, employment in computers and electronics is expected to contract in all four quarters of 2014 and 2015 despite expectations of output gains.

Nondurable goods manufacturing will experience job losses of 0.3 percent in 2014 and 1.1 percent in 2015. Among the broad sectors of nondurable goods manufacturing, textile mills and textile products, paper, printing and related support, and chemical manufacturing will all experience losses in both 2014 and 2015. These losses will be greatest in the printing and related support sector which is expected to shrink by more than 5.0 percent per year for the next two years.

The national unemployment rate is expected to fall to 6.8 percent in the first quarter of 2014 and then drop below 6.5 percent by the third quarter. This is an important benchmark (6.5 percent) because in December of 2012 the Federal

Figure 2.9. TN Unemployment Rate Continues Downward Trend But Lags Behind U.S. – Annual Unemployment Rate, 2004 – 2017



Source: Bureau of Labor Statistics; IHS Global Insight, Inc.; and CBER-UT.

2.4. Short-Term Outlook, continued

Reserve announced they would keep short-term interest rates near zero until the national unemployment rate reached 6.5 percent. However, we do not believe that interest rates will rise rapidly once this occurs, rather they will increase gradually throughout 2014 and 2015. Tennessee, unfortunately, will face a higher unemployment rate than the nation with a 7.5 percent unemployment rate in 2014 and 7.0 percent unemployment rate in 2015. While unemployment rates for both the state and the nation are trending downwards, they are still above pre-recession levels. This is illustrated in Figure 2.9 which plots the annual unemployment rates for Tennessee and the U.S. for 2004 through 2017.

Tennessee's civilian labor force will experience a minor contraction in 2014. This will be driven by an 8.3 percent drop in the number of unemployed people and a 0.6 percent increase in the number of employed people. This likely indicates that a number of unemployed people will find work in 2014 but a small number of unemployed people may also exit the labor force entirely. As a result the labor force participation rate will fall by 1.3 percent in 2014 and will mark the first time in recent history that the labor force participation rate is below 60.0 percent. Tennessee's labor force will improve slightly in 2015 when the civilian labor force is expected to expand by 1.2 percent. The number of employed people should rise by 1.8 percent and the number unemployed people should fall 6.2 percent. However, the labor force participation rate is expected to remain under 60.0 percent in 2015.

Nominal taxable sales are projected to rise by 3.4 percent in 2014. With the exception of transportation and communication, all categories of taxable sales will see growth in 2014. Automobile sales will experience the largest sales growth, expanding by 6.6 percent in 2014. In 2015 it is projected that all categories of taxable sales will grow, and as a result total taxable sales will expand by a modest 3.8 percent in 2015. On a fiscal year basis, nominal taxable sales are expected to rise by 3.1 percent in FY 2014 and 3.9 percent in FY 2015.

Tennessee Forecast at a Glance

- Inflation-adjusted gross domestic product is expected to increase by 2.8 percent in 2014 and 2.9 percent in 2015, slightly outpacing the 2.6 percent growth rate in 2013.
- The unemployment rate will fall to 7.5 percent in 2014, and 7.0 percent in 2015. This would mark the first time since 2008 that unemployment drops below 8.0 percent, however, it is still well above pre-recession levels.
- Nonfarm employment is expected to grow by 1.5 percent in 2014, while manufacturing employment will expand by 1.0 percent.
- Nominal personal income is forecasted to increase by 4.2 percent in 2014, followed by 4.5 percent growth in 2015.
- Nominal taxable sales will rise by 3.4 percent in 2014, and 3.8 percent in 2015.

2.5. Situation and Outlook for Tennessee Agriculture

Overview of Agriculture in Tennessee

2013 Year in Review

Cool weather combined with late winter and early spring rains delayed the start of 2013 farm field work. As a result, by the end of the first week in April, Tennessee farmers had planted just 1

percent of their corn crop compared to the five-year average of 13 percent. During the month, farmers were able to engage in field work 14 days so that by the end of the month with 47 percent of the crop in the field they were still one week behind in planting the corn crop. Topsoil and

2.5. Situation and Outlook for Tennessee Agriculture, continued

subsoil moisture were at adequate or surplus levels in 98 percent of the fields around the state. The development of the winter wheat crop was also behind the five-year average.

The pattern for May did not vary much from what farmers had experienced in April, with only 14 days available for field work. By the last week in May, 87 percent of the projected corn acreage had been planted compared to a more typical 95 percent. By the end of May, 21 percent of the soybeans and 37 percent of the cotton had been planted. Both of these crop plantings were well behind normal. The wheat crop was rated to be in good-to-excellent condition, though crop development remained behind normal. By the 26th of May, farmers had made the first cutting of hay on 37 percent of their acres compared to a normal of 52 percent. Topsoil and subsoil moisture levels remained at 98 percent adequate or surplus by the end of the month.

For the May 29-June 30 period, farmers had 26 days in which they could do field work. By the end of the month, corn and cotton planting had been completed and 85 percent of the anticipated soybean acres were planted. Over 90 percent of the crops were in fair to excellent condition. Wheat had been harvested from 80 percent of the acres by the end of June and farmers were experiencing excellent yields. Most farmers had completed their first cutting of hay and some were beginning their second cutting. A few areas in the state were short of subsoil moisture, but most had adequate moisture for continued crop development.

Crop conditions were mostly fair to excellent, though crop development remained behind normal throughout July. Farmers were able to complete the wheat harvest and had begun topping tobacco. A few fields were short of moisture by the end of the month, but most fields were in good-to-excellent condition. Farmers had 17.5 days in which they could do field work during July.

August provided a stable period for crop development, with adequate moisture and some warm days coming by the end of the month, moving the crops toward maturation. Farmers began harvesting corn silage fields with 71 percent

of the intended silage acres being harvested in August. The corn for grain harvest began during the last few days of the month with just 2 percent of the acres harvested. Farmers also began the tobacco harvest.

With 23.5 days suitable for field work in September, farmers were busy with harvest, though harvest was later than in most years. The drier weather resulted from fewer days of rain and was responsible for 19 percent of fields being short of moisture by the end of the month. Late fall rains slowed the crop harvest in late fall but by the end of November most crops had been put in the bin and 86 percent of winter wheat fields had been planted.

Tennessee corn production in 2013 was 127.9 million bushels on a yield of 156 bushels per acre, setting a new modern record. The harvested acreage was 820 thousand acres down from 890 thousand acres a year earlier. In addition there 950 thousand tons of corn silage harvested on 50 thousand acres.

With a national trendline harvest, the season average price is projected to be \$2.49 lower than it was a year earlier. If the 2014 national corn harvest is close to trendline, farmers could see substantially lower prices, possibly below the cost of production.

Farmers in Tennessee harvested 1.5 million acres of soybeans (40 thousand fewer acres than in 2012), bringing in 69.9 million bushels, 23.2 million bushels more than a year earlier on a yield of 46 bushel per acre, 8 bushels per acre more than in 2012. In January 2014, the USDA projected the season average price for soybeans to be \$1.90 lower than they were a year earlier.

In 2013, the cotton yield was 871 pounds per acre, compared to 950 pounds per acre in 2012. With 2013 cotton acreage lower at 233 thousand acres, when compared to 2012 cotton acres of 377 thousand, Tennessee cotton production was 423 thousand bales in 2013 which is well below 2012's production of 743 thousand bales. Cottonseed production was 141 thousand tons in 2013. The cotton price is projected to be slightly above the price a year earlier.

2.5. Situation and Outlook for Tennessee Agriculture, continued

July saw the completion of the harvest of 540 thousand acres of wheat, the largest acreage since 1983. Abandoned winter wheat acreage was 70 thousand acres. In 2012, the abandoned acreage totaled 80 thousand acres out of 420 thousand acres planted. The yield was 71 bushels per acre—a record yield for Tennessee—for a total of 38.3 million bushels. The value of wheat production for the 2013 crop was \$145 million.

Tobacco production in 2013 was 44.6 million pounds, lower than the 2012 production of 53 million pounds. Both lower acreage and yields contributed to the smaller 2013 crop. The value of Tennessee tobacco production was \$44.6 million.

With top soil and subsoil moisture remaining in the adequate-to-surplus range for most fields for most of the year, Tennessee farmers harvested 4.4 million tons of hay in 2013, 800 thousand tons more than they harvested a year earlier. This increase came about because of both increased acreage (150 thousand additional acres) and increased yields (15 percent) from a year earlier.

Tennessee farmers planted 5.25 million acres for all crops in 2013, 360,000 acres more than the previous year. Of the planted acres, farmers harvested 5.1 million acres, 360 million more than in 2012. Tennessee harvested acreage in 2013 increased while national harvested acreage declined by slightly more than 5 million acres.

Tennessee Agriculture – 2012

In 2012, the number of farms in Tennessee was 76,000, a loss of 1,300 farms, while the land in farms remained steady at 10.8 million acres. With fewer farms and steady acreage, the average farm size increased from 140 acres in 2011 to 142 acres in 2012. These changes reflect a long-term trend of farm consolidation in Tennessee. Over 41 percent of Tennessee's land base is in farmland, 55 percent of which is cropland. Nationally, Tennessee ranks 9th in the number of farms, 27th in the number of farm acres, and 44th in average farm size. In 2012, the state's top five agricultural commodities were cattle and calves; soybeans; corn; broilers; and cotton. These five production areas account for 71 percent of cash receipts from

farm marketings. Crops accounted for 60 percent of farm cash receipts, with livestock and products accounting for the remaining 40 percent. In the not-so-distant past crop and livestock receipts were closer to each other. The difference in 2012 was due to the continuation of high crop prices. If crop prices continue to drop as they have with a good 2013 national harvest, we could see the share of farm receipts for livestock move back towards 50 percent.

Of the 76,000 farms in Tennessee in 2012, 52,400 had sales between \$1,000 and \$9,999. An additional 18,800 had sales between \$10,000 and \$99,999, with 1,700 having sales between \$100,000 and \$249,000; 1,500 farms had sales between a quarter- and a half-million dollars and 1,600 farms had total sales of \$500,000 and above. Farms with sales over \$250 thousand in 2012 represented 4 percent of all farms while producing 39 percent of all land in production.

Agricultural Products in Tennessee in 2012

Agriculture in Tennessee is quite varied. The state's top 14 agricultural commodities, in terms of 2012 value of receipts, include cattle and calves; soybeans; corn; broilers; cotton; greenhouse/nursery; dairy products; wheat; tobacco; hay; vegetables & melons; hogs; eggs; fruits and nuts. In 2011, all agricultural commodities in Tennessee generated more than \$3.8 billion in cash receipts, an increase of 10 percent over 2011 levels.

Figure 2.10 shows the relative share of cash receipts by commodity. Cash receipts from cattle and calves increased by over \$197 million, soybeans increased by nearly \$131 million, corn increased by \$58 million and tobacco increased by over \$15 million. Broilers and dairy saw a decline in cash receipts. In 2012 Tennessee ranked second among all states in meat goat production; third in tobacco, seventh in cotton, ninth in tomatoes and thirteenth in broilers.

Tennessee's 2012 agricultural exports of \$1.580 billion were \$243 million higher than the value of agricultural exports in 2011, an increase of 2.8 percent. By way of contrast, US exports of agricultural products increased by \$4.9 billion to

2.5. Situation and Outlook for Tennessee Agriculture, continued

\$141.3 billion (3.6 percent). Tennessee's agricultural exports were 1.1 percent of the total value of US agricultural exports for the 2012 calendar year.

Tennessee Agricultural Sector Outlook

Farm Income

Tennessee net farm income for 2013 is projected to be \$813 million, \$5 million higher than 2012. Direct government payments from federal farm programs accounted for \$176 million or 22 percent of 2013 Tennessee net farm income.

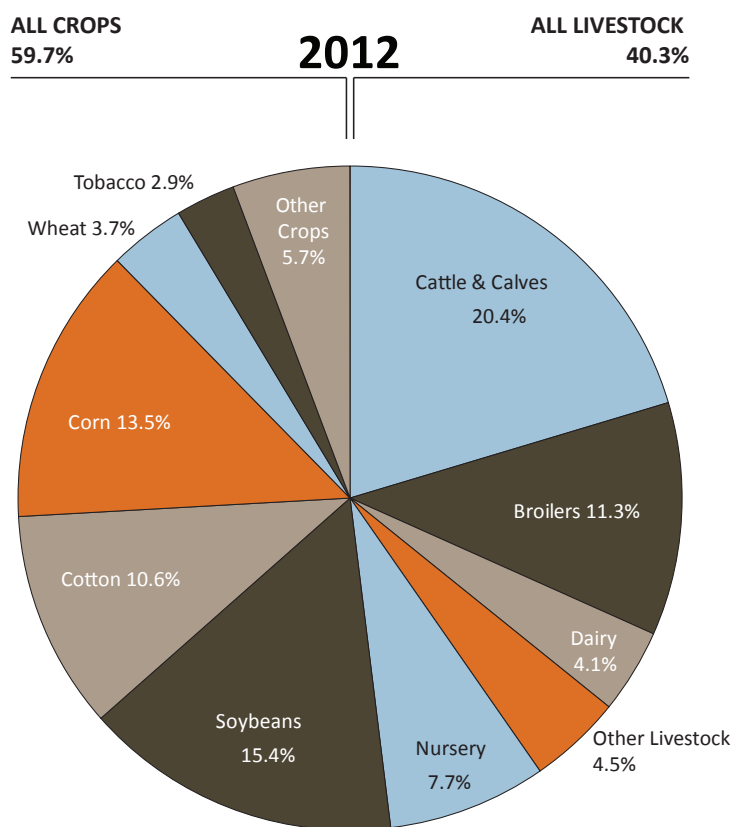
The USDA national forecast for 2013 net farm income is \$131 billion, \$17 billion above the 2012 estimate of \$117.9 billion. The increase is the result of higher income for livestock. Crops

suffered from weaker prices and cattle producers saw gains from higher value of production.

U.S. Crops Outlook

Corn—With a 300 thousand acre increase in harvested acres and a 35.4 bushels per acre increase in yield, 2013 corn production in the US decreased dramatically from the drought plagued 2012 production levels. With the ratio of soybean prices to corn prices favoring the planting of soybeans, farmers reduced their corn plantings by 1.8 million acres. Good weather through the critical pollination and maturation periods resulted in the increase in harvested acres, as fewer acres were abandoned compared to a year earlier. The January 2014 projection for US 2013 crop-year corn production

Figure 2.10. Leading Tennessee Commodities for Cash Receipts, 2012



Source: United States Department of Agriculture and Economic Research Service.

2.5. Situation and Outlook for Tennessee Agriculture, continued

is 13.9 billion bushels, 3.1 billion bushels above 2012 production. As it became apparent that the 2013 crop would be sufficient to meet expected needs, corn prices which were \$7.13 per bushel in March, before planting got under way, fell to \$4.31 per bushel in December. Feed utilization for the 2013 crop year is expected to increase by 965 million bushels and corn used for ethanol production is projected to increase to 5.3 billion bushels as a result of adequate supplies and lower corn prices. Crop-year-ending stocks are expected to increase to 1.6 billion bushels for a carry-out stocks-to-use ratio of 12.4 percent. The 2013 crop-year-ending stocks are double that of a year earlier. The January 2013 USDA midpoint projection for the season average price of corn for the 2013 crop year is \$4.40, \$2.49 below the estimated season average price for the 2012 corn crop in January a year ago. The world supply of coarse grains—corn and its feed substitutes: sorghum, barley, oats, rye, millet and mixed grains—is 7.6 percent larger than a year earlier. The projected 2013 crop-year, world, year-ending-stocks-to-use ratio for coarse grains is 16.3 percent.

Given the increased corn production in Argentina and Brazil in 2013, it would not be unexpected that much of that land area will remain in production for the short to medium run, keeping downward pressure on prices. As the result of lower corn prices relative to soybean prices, it is expected that some Tennessee corn acres will be planted to soybeans in 2014. If the summertime expected national production of corn in 2014 remains at near trendline levels, it is not unreasonable to expect that corn prices will drop further.

Soybeans—U.S. soybean production in 2013 was 255 million bushels higher than a year earlier primarily as a result of a 3.5 bushel/acre increase in yield. For the 2013 crop year, US soybean crush is projected to increase by 11 million bushels and exports are projected to increase by 175 million bushels. The 2013 crop-year-ending stocks-to-use ratio for soybeans is projected to be 4.5 percent, a relatively normal level for soybeans. The midrange of the projected 2012 crop year farmgate price for U.S. soybeans is \$12.50, \$1.90 lower than last year.

Typically soybean prices are 2.5 times the price of corn while the USDA projected price for the 2013 soybean crop is 2.84 times the projected price of corn. That price ratio would suggest that soybeans may gain some 2014 acreage from corn, both nationally and in Tennessee. US soybean exports, however, will continue to struggle as long as southern hemisphere soybean production continues to increase.

Wheat—Harvested wheat acreage for the 2013 crop year was 3.7 million acres smaller than the previous year and the yield was up by 0.9 bushels/acre, resulting in total production of all classes of wheat of 2.13 billion bushels. This is 136 million bushels lower than a year earlier. The domestic use of wheat is projected to decrease by 132 million bushels due mostly to a decline in the use of wheat for animal feed as the result of a higher corn production level. Exports are projected to increase by 18 million bushels. The 2013 US domestic use of wheat is projected to consume 53.1 percent of the crop, while the export share is 46.9 percent. The year-ending stocks-to-use ratio is projected at 25.3 percent. The 2012 projected stocks-to-use ratio is well within the historical range. The season average US farmgate price for wheat in the 2013 crop year is projected to be \$6.80, 97 cents lower than in 2012. World wheat production in the 2013 crop year is projected to be 60 million metric tons higher than in 2012 while consumption is expected to increase by 28 million metric tons.

Cotton—U.S. cotton producers decreased their 2013 harvested acres by 1.71 million acres. The US cotton yield decreased by 61 pounds per acre. The result was a 4.13 million bale (480 pounds) decrease in production from the previous year. With exports accounting for 74 percent of the US crop, international demand is essential to maintaining a profitable price in the US. USDA projects that the 2011 season average farmgate price for cotton will be 74.5 cents per pound, up 2 cents from a year earlier.

Livestock Outlook

Beef—The USDA projects 2014 US beef production at 24.4 billion pounds, 1.4 billion pounds below 2013 production. US per capita

2.5. Situation and Outlook for Tennessee Agriculture, continued

consumption of beef for 2013 is projected to fall to 53.6 pounds, 2.9 pounds less than 2013. Beef imports in 2014 are projected to increase by 31 million pounds. Exports are projected to fall by 199 million pounds. Average beef prices are expected to increase by 7.6 cents per pound in 2014.

Pork—Pork production is expected to increase in 2014 by 385 million pounds to 23.6 billion pounds. USDA projects imports to increase by 4 million pounds in 2014. Exports are projected to increase by 206 million pounds. The US per capita consumption of pork is projected to increase to 47 pounds. The annual average price of pork is expected to drop by 2 cents per pound.

Broilers—Broiler production in 2014 is expected to increase by 1.1 billion pounds to 38.9 billion pounds as the result of increased US per capita consumption of chicken. Broiler imports are relatively small and a decrease of 7 million pounds brings broiler imports to 112 million pounds. Exports in 2013 are expected to increase by 134 million pounds to 7.05 billion pounds. US consumption of broilers is projected to increase to 83.7 pounds per capita.

Milk—Milk prices are projected to be in the \$20.60-\$21.40 per cwt. range in 2013.

Ag Sector Issues

Commodity Price Outlook

It could be worse than previously thought. With record corn production in a year with heavy spring rains and late planting problems, the price drop from last year suggests that corn demanders see the crop-reducing effects of 2012 drought as an aberration—since apparently improved seed genetics successfully protected 2013 corn production from moderate drought in some areas and planting problems in others—some areas had both problems.

Compared to the 2012 corn crop, the November World Supply and Demand Estimates (WASDE) reports record production, increased crop utilization—both domestically and internationally—and the year-ending stocks increasing by nearly 1.2 billion bushels of corn.

The result is a projected season average corn price received by farmers of \$4.50 per bushel for the 2013 corn crop, a drop of \$2.93 per bushel from a year earlier. For most farmers, even on the most productive land, \$4.50 is getting frighteningly close to their cost of production—and for some-to-many land costs would not be covered. This leaves little margin on the downward side before things get really scary.

And scary it might be. While recognizing that these numbers are for the outer edges of the US corn belt, on November 18, 2013 DTN Ag Policy Editor Chris Clayton reported that “DTN’s market tracker shows corn for delivery selling as low as \$3.17 a bushel in northeast Montana.” He also said “DTN’s Market Tracker shows corn prices below \$3.70 in parts of the eastern Corn Belt, notably throughout parts of Michigan and Ohio. Farther west, prices throughout North and South Dakota are hitting lows below \$3.40 a bushel in some places with prices averaging more around \$3.50 a bushel.”

Can it get any worse? That is a distinct possibility. Consider the following scenario, suppose that: 1) the USDA has underestimated the corn crop by 100 million bushels and 2) it has also overestimated domestic and export consumption by 200 million bushels.

If that scenario comes about, total use would decline to 12.750 billion bushels and the 2013 year-ending stocks for corn would increase to 2.187 billion bushels, resulting in a year-ending corn stocks-to-use ratio of 17.2%.

The last time we saw the year-ending stocks-to-use ratio at that level was 2005, just before the ethanol boom took off. The price was \$2.00 per bushel. As unlikely as that price may be, given today’s production costs, that price would be devastating. Even if the price fell to \$3.00 because of forward contracting and other pricing strategies, the effects would still be devastating.

Worse yet, suppose the 2014 corn crop adds 500 million bushels or more to the year-ending corn levels, \$2.00 could actually be a possibility. Remember 1998-2001, the Loan Deficiency Payments and emergency payments?

2.5. Situation and Outlook for Tennessee Agriculture, continued

For the 2013 crop year, WASDE projects that 4.9 billion bushels of corn will be used for ethanol production, a level that we have generally seen since 2010. With ethanol not continuing to consume 500 million extra bushels of corn each year, the 5 billion bushel mark for ethanol production is like water in a full reservoir; it is the same as concrete and any extra corn is like additional water flowing over the top of the dam—existing stable demand provides little or no protection against a flood of additional production and lower prices.

Coming back to what could happen next year if corn production in 2014 outstrips utilization causing year-ending stocks go up by another 500 million bushels, further depressing prices.

Revenue insurance would provide very-little-to-no protection against production costs—because the level of insured revenue would be based on the percentage of a very low price. That leaves some income from Loan Deficiency Payments and the hope for \$10-\$15 billion in emergency payments, especially if direct payments are taken away.

Perhaps writing a farm bill in a year of declining prices will persuade legislators to provide farmers with an adequate safety net. It would be even better if they designed the farm program based on the fundamental characteristics of crop production: the low price elasticity of supply, the low price elasticity of demand, the tendency for supply to grow faster than demand, and the fixity of resources.

CHAPTER 3: THE TENNESSEE ECONOMY: LONG-TERM OUTLOOK

In this chapter—

- 3.1. Introduction
- 3.2. Job Growth
- 3.3. Unemployment
- 3.4. Population
- 3.5. Interest Rates and the Price Level
- 3.6. Income and Output

3.1. Introduction

This chapter presents a long-term retrospective and forecast for the state economy extending out to 2023. Long-term growth arises from growth in the labor force, rising skill levels of workers, productivity gains, business investment in productive capacity and public sector investments in infrastructure that facilitate private sector activity. Together these ingredients to growth will affect if not dictate the prosperity and economic wellbeing of Tennesseans.

The forecast presented below is a *trend* forecast, unlike the *cyclical* forecast of the U.S. and state economies presented in chapters 1 and 2 of this report. Business cycles typically have a small-to-negligible effect on the longer-term trend performance of the economy. But that is certainly not the case with the Great Recession. While the recession ended (i.e. bottomed out) in the summer of 2009, lingering effects continue to work their way through the state and national economies. Output and income levels in Tennessee were relatively quickly restored in the aftermath of the recession. Employment levels and the unemployment rate, on the other hand, have not returned to where they were before

the onset of the recession. Employment should finally see a full calendar-year recovery by 2015 while the unemployment rate will remain above its prerecession low through the long-term forecast horizon.

Manufacturing is in the midst of a short-term renaissance and job gains have been realized dating back to 2011. The long-term forecast indicates that manufacturing employment in Tennessee will return to its trend decline in 2017. By 2023, manufacturing will account for only about one-in-ten jobs in Tennessee, compared to 15.5 percent of the employment pie in 2003. It is important to note that manufacturing output will continue to grow despite anticipated employment setbacks. In fact, manufacturing will see its share of state output rise slightly in the decade ahead. Professional and business services, along with education and health services, will account for much larger shares of statewide employment by 2023. Overall economic growth will slow slightly near the end of the outlook horizon as a result of slower growth in the labor force.

The remainder of this chapter delves into the details of Tennessee's historical growth and

3.1. Introduction, continued

prospects for the future. Considerable emphasis is placed on the labor market, especially issues related to unemployment. Perhaps the most significant weak spot in the economy today is the

highly-elevated unemployment rate that continues to grip the state economy and many of its substate regions. Unfortunately, there will be no quick resolution of this problem.

3.2. Job Growth

Long-term job growth trends are determined primarily by population and labor force growth. Behind the scenes of population and labor force growth are the dynamics of firm location, expansion, decline and closure which together affect employment opportunities. A high demand for labor will help attract workers and strong population growth will give rise to a larger labor force that can be tapped by prospective employers. On the other hand, if there is little demand for workers, then population growth will be sluggish. Tennessee observes these patterns on an ongoing basis across the state, with metropolitan areas often performing better than their rural counterparts in terms of both employment and population growth. For example, the middle Tennessee region centered around Nashville has seen strong job growth as well as strong population growth for many years. A number of smaller, isolated rural counties have actually seen net outmigration of people in the face of bleak employment opportunities over the past decade.

Between 2001 and 2013, the state economy saw nonfarm employment grow by only 2.1 percent yielding a meagre compound annual growth rate of less than 0.2 percent. By comparison, the U.S. experienced nonfarm job growth of 3.0 percent and a compound annual growth rate just above 0.2 percent, a similarly meagre performance. The blame for this subpar employment growth is the Great Recession that began in the final quarter of 2007 and ended in the second quarter of 2009. In the past decade, annual employment levels in Tennessee peaked in 2007, followed by job losses in 2008, 2009 and 2010. Despite job growth in subsequent years, the level of employment that prevails today trails the pre-recession peak.

Manufacturing endured the deepest employment

losses over the course of the recession on the heels of year after year of more modest losses that date back to the 1990s. The worst performance was in 2009 when manufacturing experienced job losses totaling 14.3 percent compared to losses of 11.6 percent for the national economy. Both durable and nondurable goods manufacturing suffered steep setbacks for the year, though durables performed more poorly than nondurables. Only the food and beverage subsector of nondurable goods manufacturing was able to eke out a small gain in 2009. Employment began its rebound in 2010 and job growth has been healthy in subsequent years.

Figure 3.1 provides three snapshots of county-level manufacturing employment as a share of total employment covered by the state's unemployment insurance system. In 2003, there were nine counties with manufacturing employment shares in excess of 40 percent and eight counties with shares below 10 percent. By 2007, just before the depths of the recession, only two counties could attest to shares above 40 percent and the number of counties with shares below 10 percent had crept to nine. In post-recession year 2012, there was only one county—Meigs—with a manufacturing base that accounted for more than 40 percent of county employment. Sixteen counties had manufacturing shares under 10 percent.

The depth of the losses in total nonfarm and manufacturing employment for the state and the nation are shown in Figure 3.2, along with projections extending out to 2023, the end of the long-term forecast window. Slight acceleration in near-term job growth is clear in the figure, followed by the subsequent trend of slower job growth. Total nonfarm employment in Tennessee will be fully restored to prerecession levels by 2015

3.2. Job Growth, continued

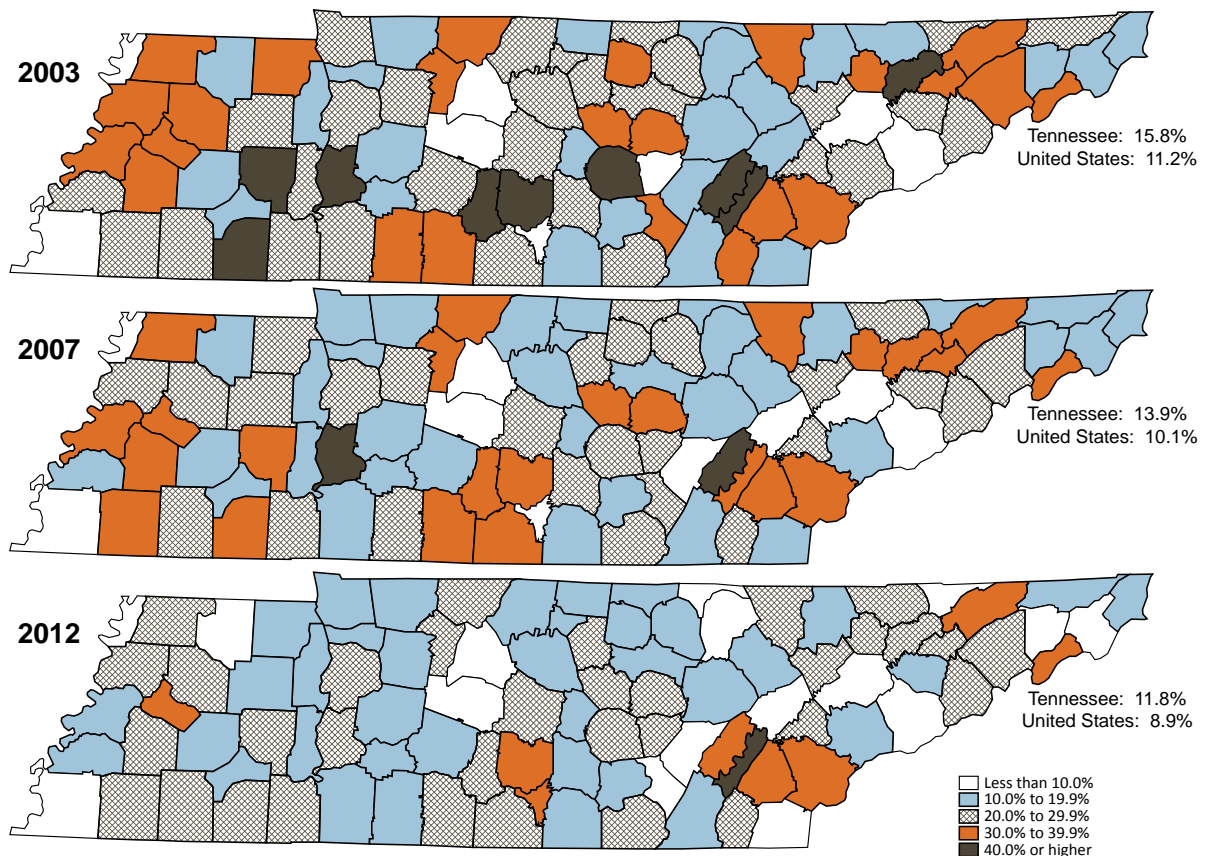
with the national economy seeing full restoration in 2014. The notable employment gains now taking place in manufacturing will not be sustained—manufacturing employment in Tennessee is expected to return to trend contraction in 2017 versus 2020 for the nation. Gains in durable goods employment will offset ongoing contraction in nondurable goods employment through 2017. While durable goods manufacturing in Tennessee should see continued job growth in 2018, it will prove insufficient to offset losses in nondurable goods.

The employment dynamics of the last decade, coupled with future dynamics, will change the structure of the state's employment mix as shown in Figure 3.3. Manufacturing, which accounted

for 15.5 percent and 11.6 percent of nonfarm jobs in 2003 and 2013, will contribute only about one in ten jobs by 2023. Despite declining long-term employment levels and a smaller contribution to the mix of state jobs, manufacturing output is expected to experience healthy growth and account for a larger share of state output in 2023.

Professional and business services, which are expected to enjoy especially healthy job gains, will see their share of the state's employment base grow from 10.8 percent in 2003 to 15.2 percent in 2023. Education and health services will also experience a large increase in the share of statewide employment. Government, information, trade, transportation and utilities, natural resources, mining and construction, financial activities and

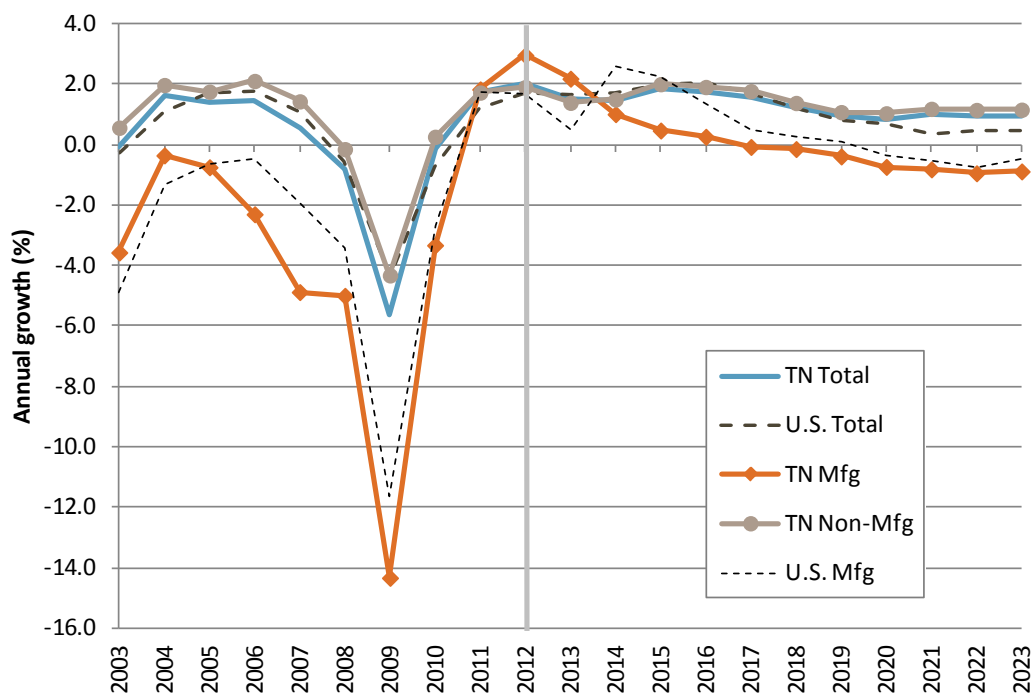
Figure 3.1. Manufacturing is Playing a Smaller Role in Local Economic Development



Manufacturing employment as a share of total covered employment.
Source: Bureau of Labor Statistics.

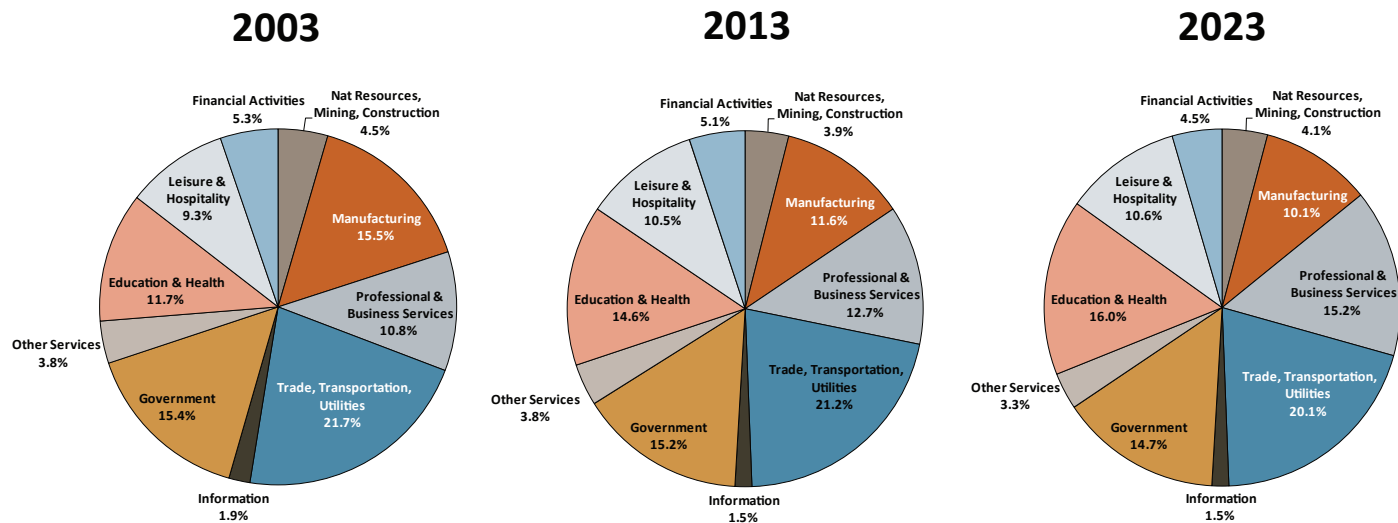
3.2. Job Growth, continued

Figure 3.2. Nonfarm Job Growth Will Restore Employment to Precession Levels in 2014



Source: Bureau of Labor Statistics; IHS Global Insight, Inc.; and UT-CBER.

Figure 3.3. Tennessee Nonfarm Employment Undergoes Structural Change



Source: Bureau of Labor Statistics and UT-CBER.

3.2. Job Growth, continued

other services will see smaller slices of the pie emerge over time. It is important to note that aside from the other services and manufacturing sectors, all other broad sectors will experience net

gains in employment *levels* by 2023. (See Table 5 in the long-term outlook portion of Appendix A for detailed data on projected employment levels.)

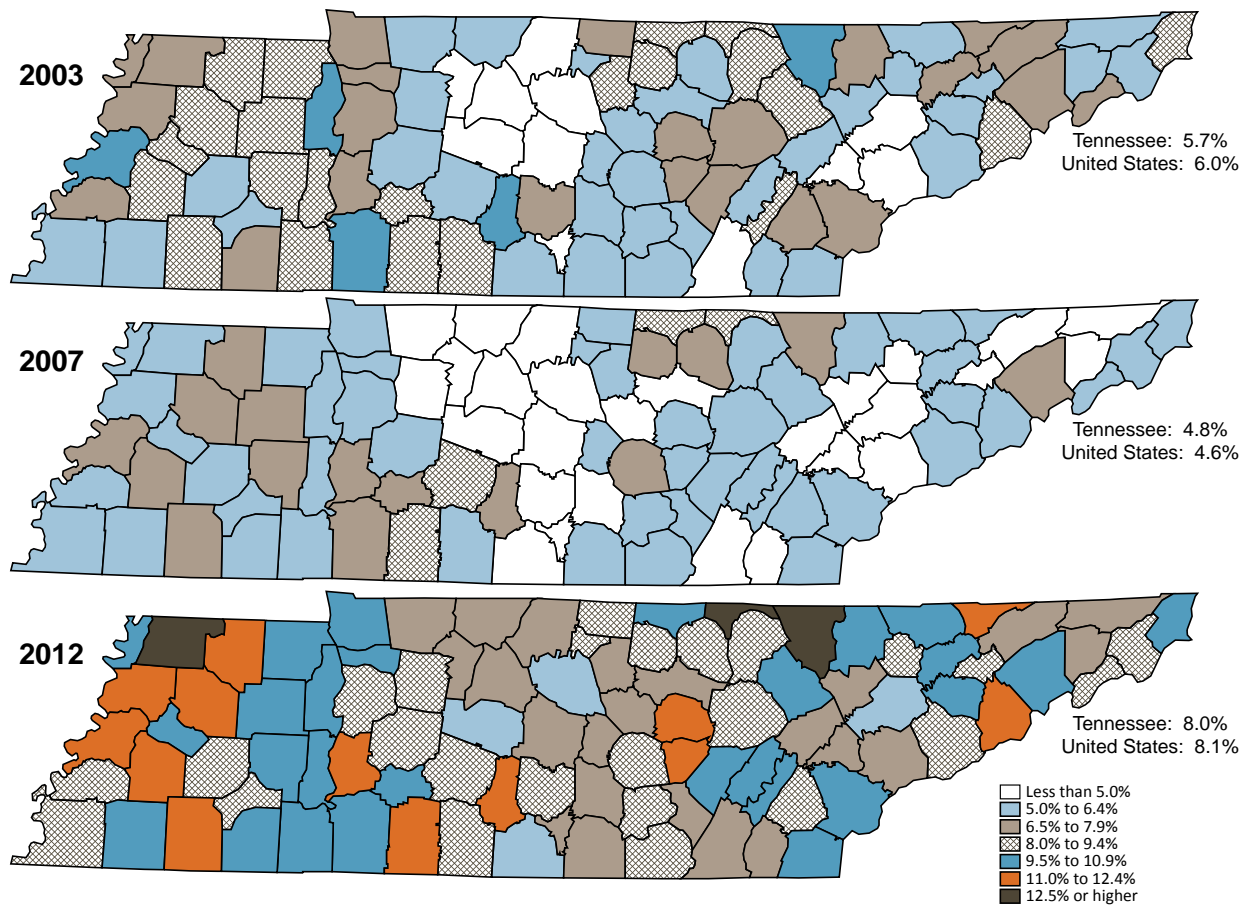
3.3. Unemployment

In 2001, a recession year, the state and national unemployment rates stood at 4.7 percent. Nonfarm employment contracted in 2002 and 2003 despite the end of the recession. These post-recession losses motivated analysts to coin the phrase “jobless recovery.” Unemployment rates ultimately drifted down to a statewide low of 4.8 percent and a national low of 4.6. The Great

Recession led to devastating job losses and sharp spikes in the unemployment rate. Tennessee’s unemployment rate subsequently peaked at 10.5 percent in 2009 while the national rate topped out at 9.6 percent in 2010.

The rising unemployment rate across Tennessee counties is shown in Figure 3.4, which captures information for 2003, 2007 and 2012. A

Figure 3.4. The Great Recession Continues to Affect Local Unemployment Rates



Annual unemployment rate.
Source: Bureau of Labor Statistics.

Table 3.1. Selected U.S. and Tennessee Economic Indicators

	January 2014										
	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
US GDP (Bil2009\$).....	15761.3	16182.8	16708.5	17273.6	17822.7	18327.7	18815.3	19286.6	19738.2	20185.4	20642.4
Percentage change.....	1.88	2.67	3.25	3.38	3.18	2.83	2.66	2.51	2.34	2.27	2.26
US GDP (Bil\$).....	16792.3	17507.9	18375.4	19316.0	20261.2	21191.8	22107.9	23048.3	24000.1	24964.5	25968.8
Percentage change.....	3.37	4.26	4.96	5.12	4.89	4.59	4.32	4.25	4.13	4.02	4.02
TN PERSONAL INCOME (MIL2009\$).....	239587	246464	253465	260092	267429	274329	281886	289325	296519	303892	311538
Percentage change.....	1.52	2.87	2.84	2.61	2.82	2.58	2.75	2.64	2.49	2.49	2.52
US PERSONAL INCOME (BIL2009\$).....	13190	13640	14125	14640	15183	15666	16125	16547	16943	17357	17788
Percentage change.....	1.74	3.41	3.55	3.65	3.71	3.18	2.93	2.62	2.39	2.44	2.48
TN PERSONAL INCOME (MIL\$).....	256814	267595	279543	291950	305547	319285	333858	348905	364181	379926	396388
Percentage change.....	2.65	4.20	4.46	4.44	4.66	4.50	4.56	4.51	4.38	4.32	4.33
US PERSONAL INCOME (BIL\$).....	14138	14786	15527	16356	17253	18126	18979	19827	20674	21557	22486
Percentage change.....	2.87	4.58	5.02	5.34	5.48	5.06	4.70	4.47	4.27	4.27	4.31
TN NONFARM JOBS (THOUS).....	2755.3	2795.2	2846.4	2895.6	2941.0	2976.8	3004.3	3029.9	3059.6	3088.2	3117.7
Percentage change.....	1.49	1.45	1.83	1.73	1.57	1.22	0.92	0.85	0.98	0.94	0.95
US NONFARM JOBS (MIL).....	135.9	138.3	141.0	143.9	146.4	148.1	149.3	150.3	150.8	151.5	152.1
Percentage change.....	1.64	1.71	1.99	2.04	1.73	1.18	0.79	0.67	0.34	0.45	0.45
TN MFG JOBS (THOUS).....	320.3	323.6	325.1	326.0	325.8	325.3	324.1	321.7	319.1	316.1	313.3
Percentage change.....	2.19	1.02	0.48	0.27	-0.07	-0.14	-0.38	-0.73	-0.81	-0.94	-0.88
US MFG JOBS (MIL).....	12.0	12.3	12.6	12.7	12.8	12.8	12.8	12.8	12.7	12.6	12.6
Percentage change.....	0.51	2.56	2.25	1.34	0.47	0.27	0.08	-0.35	-0.55	-0.74	-0.45
TN UNEMPLOYMENT RATE (%).....	8.2	7.5	7.0	6.5	6.3	6.2	6.2	6.0	5.8	5.6	5.5
US UNEMPLOYMENT RATE (%).....	7.4	6.5	5.9	5.4	5.1	5.0	5.0	4.9	5.0	5.1	5.1
CHAINED PRICE INDEX, GDP (2009=100.0).....	106.5	108.2	110.0	111.8	113.7	115.6	117.5	119.5	121.6	123.7	125.8
Percentage change.....	1.39	1.62	1.65	1.68	1.66	1.71	1.62	1.71	1.75	1.71	1.72
US PERS CONSUMP DEFL (2009=100.0).....	107.2	108.4	109.9	111.7	113.6	115.7	117.7	119.8	122.0	124.2	126.4
Percentage change.....	1.11	1.13	1.41	1.63	1.71	1.82	1.73	1.81	1.84	1.78	1.78
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000)....	2.330	2.363	2.404	2.449	2.495	2.546	2.594	2.645	2.699	2.751	2.803
Percentage change.....	1.46	1.44	1.75	1.83	1.91	2.04	1.87	1.97	2.05	1.92	1.91
BANK PRIME INTEREST RATE (%).....	3.3	3.3	3.4	5.2	6.8	7.0	7.0	7.0	7.0	7.0	7.0
FEDERAL FUNDS RATE (% per annum).....	0.107	0.090	0.353	2.155	3.829	4.000	4.000	4.000	4.000	4.000	4.000
30-YEAR FIXED MORTGAGE RATE (%).....	4.0	4.6	5.0	5.8	6.5	6.6	6.6	6.6	6.6	6.6	6.6
TN TAXABLE SALES (MIL2009\$).....	93995	95958	98038	99939	102104	104325	106680	108959	111299	113808	116397
Percentage change.....	1.61	2.09	2.17	1.94	2.17	2.18	2.26	2.14	2.15	2.25	2.28
TN TAXABLE SALES (MIL\$).....	100752	104185	108123	112179	116657	121421	126348	131396	136696	142282	148098
Percentage change.....	2.75	3.41	3.78	3.75	3.99	4.08	4.06	4.00	4.03	4.09	4.09
TN AVG ANNUAL WAGE, NONFARM (2009\$).....	42146	42657	43074	43358	43622	43834	44091	44329	44510	44710	44896
Percentage change.....	0.29	1.21	0.98	0.66	0.61	0.49	0.59	0.54	0.41	0.45	0.42
TN AVG ANNUAL WAGE, NONFARM (\$).....	45176	46313	47504	48667	49838	51016	52219	53456	54665	55895	57122
Percentage change.....	1.41	2.52	2.57	2.45	2.41	2.36	2.36	2.37	2.26	2.25	2.20

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

3.3. Unemployment, continued

3.3. Unemployment, continued

small number of counties had highly-elevated unemployment rates in 2003, including Lauderdale, Benton, Wayne, Marshall and Scott Counties where rates were in excess of 9.5 percent; 11 counties had unemployment rates under 5 percent. By 2007, on the eve of the recession, labor market conditions had improved markedly. Only four counties had unemployment rates above 8 percent and no county experienced an unemployment rate in excess of 9.5 percent; 27 counties had rates under 5 percent. The dramatic impact of the recession can be seen in the last panel of Figure 3.4. In 2012—three years after the end of the recession—unemployment rates were up across the state. Sixteen counties experienced unemployment rates above 11 percent and not a single county had an unemployment rate below 5 percent. West Tennessee had the most pervasive problem of elevated unemployment rates.

The pattern just described for Tennessee is part of the national problem of elevated and prolonged unemployment. Job growth has generally been positive on a monthly, quarterly and annual basis for several years now. But this growth has been inadequate to absorb the existing ranks of the unemployed plus the new entrants to the labor market coming from high school and post-secondary institutions.

Table 3.2 shows the pattern of unemployment for different measures of labor underutilization for the national economy for the last decade. U-3 is the official national unemployment rate that reflects the share of the labor force that is not employed. (See the nearby boxed insert for a more detailed discussion of how unemployment rates are measured.) As discussed above, the official unemployment rate drifted down through the middle of the 2000s before rising sharply

How is the Unemployment Rate Measured?

The unemployment rate is in principle a simple measure: it is the percentage of the labor force that is unemployed. In practice it is complicated by a number of measurement issues. A person is considered unemployed when they do not have a job *and* have actively looked for one in the past four weeks. The labor force is defined as adult civilian, non-institutionalized persons who are available for and willing to work; it is also the sum of unemployed and employed people. People who fall into neither category are termed *not in the labor force*. This includes homemakers and retirees, for example. Perhaps most importantly in a sick economy, this group also includes *discouraged workers*. Discouraged workers are not captured in the unemployment rate because they have given up looking for employment and thus cannot be counted as unemployed. Their exit from the labor market puts downward pressure on the unemployment rate, and when the numbers are large may falsely indicate a healthier economy.

While the categories are straightforward, sorting an entire population into them is not. The Bureau of Labor Statistics (BLS) could not take a population census of the labor force to directly determine the unemployment rate every month. Instead, it estimates both unemployment and the labor force using sample data from the Current Population Survey (CPS). The CPS asks *people* about their employment status and is used in estimating unemployment at all geographic levels. Using the CPS sample, the BLS estimates the national unemployment rate. Following BLS guidelines, the Tennessee Department of Labor and Workforce Development estimates unemployment at the state and local levels.

As you might imagine, estimations using sampling data are imperfect. Such imperfections generally increase as sample sizes get smaller. Tennessee residents, for example, make up only a fraction of the CPS responses, which surveys a mere 60,000 households each month. As a result, state and local estimates of unemployment tend to be subject to greater statistical error than their national counterpart. This is a primary reason why volatility is observed in the unemployment rate at all levels, and why in response the BLS benchmarks (i.e. links) state rates to regional rates, and regional rates to the national rate.

3.3. Unemployment, continued

as a result of the recession. This measure of unemployment fails to capture all workers who experience underutilization whether in terms of employment, hours of work or earnings. U-4 includes discouraged workers, i.e. those individuals who have dropped out of the labor force because of bleak employment prospects. Including discouraged workers raises the unemployment rate by one-half a percentage point.

The broadest measure of unemployment is U-6. This includes the unemployed as measured by the official U-3 measure, but also discouraged workers and those who are underemployed, i.e. people who would like to work more hours but are not able to do so. While the official U.S. unemployment rate stood at 7.0 percent in November of last year, U-6 indicates a much higher rate of 13.2 percent.

The primary reason for these pervasively high unemployment rates is inadequate job creation--layoffs and discharges for the national economy are now below the levels of the early-to-mid-2000s. Figure 3.5 shows national data on the number of

unemployed people per job opening dating back to 2003. In the depths of the recession, the number of unemployed people per job spiked to nearly 7. While the situation has improved markedly since then, the number of unemployed workers per job opening is now just under 3. In October, 2013, there were 3.9 million job openings and yet there were almost 10 million unemployed workers using the *official* measure of unemployed people (U-3). There is no reason to believe that the situation is materially different in Tennessee.

Subpar labor market performance has helped drive down labor force participation rates for both Tennessee and the U.S. as shown in Figure 3.6. Labor force participation rates were expected to trend down over the long term because of slower population growth. But the pattern of the last several years has been unprecedented. Some improvement is expected in the next several years as modest-to-strong economic growth works to undo the damage from the recession. Late in the decade, the labor force participation rate will return

Table 3.2. Alternative Measures of Labor Underutilization Reveal the Depths of the Nation's Unemployment Problem

Measure	Annual Rate											Nov-13
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
U-1 Persons unemployed 15 weeks or longer, as a percentage of the civilian labor force	2.3	2.1	1.8	1.5	1.5	2.1	4.7	5.7	5.3	4.5	3.8	
U-2 Job losers and persons who completed temporary jobs, as a percentage of the civilian labor force	3.3	2.8	2.5	2.2	2.3	3.1	5.9	6.0	5.3	4.4	3.7	
U-3 Total unemployed, as a percentage of the civilian labor force (official unemployment rate)	6.0	5.5	5.1	4.6	4.6	5.8	9.3	9.6	8.9	8.1	7.0	
U-4 Total unemployed plus discouraged workers, as a percentage of the civilian labor force plus discouraged workers	6.3	5.8	5.4	4.9	4.9	6.1	9.7	10.3	9.5	8.6	7.5	
U-5 Total unemployed, plus discouraged workers, plus all other persons marginally attached to the labor force, as a percentage of the civilian labor force plus all persons marginally attached to the labor force	7.0	6.5	6.1	5.5	5.5	6.8	10.5	11.1	10.4	9.5	8.3	
U-6 Total unemployed, plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percentage of the civilian labor force plus all persons marginally attached to the labor force	10.1	9.6	8.9	8.2	8.3	10.5	16.2	16.7	15.9	14.7	13.2	

NOTE: Persons marginally attached to the labor force are those who currently are neither working nor looking for work but indicate that they want and are available for a job and have looked for work sometime in the past 12 months. Discouraged workers, a subset of the marginally attached, have given a job-market related reason for not currently looking for work. Persons employed part time for economic reasons are those who want and are available for full-time work but have had to settle for a part-time schedule. Updated population controls are introduced annually with the release of January data.

Source: Bureau of Labor Statistics, *Current Population Survey*.

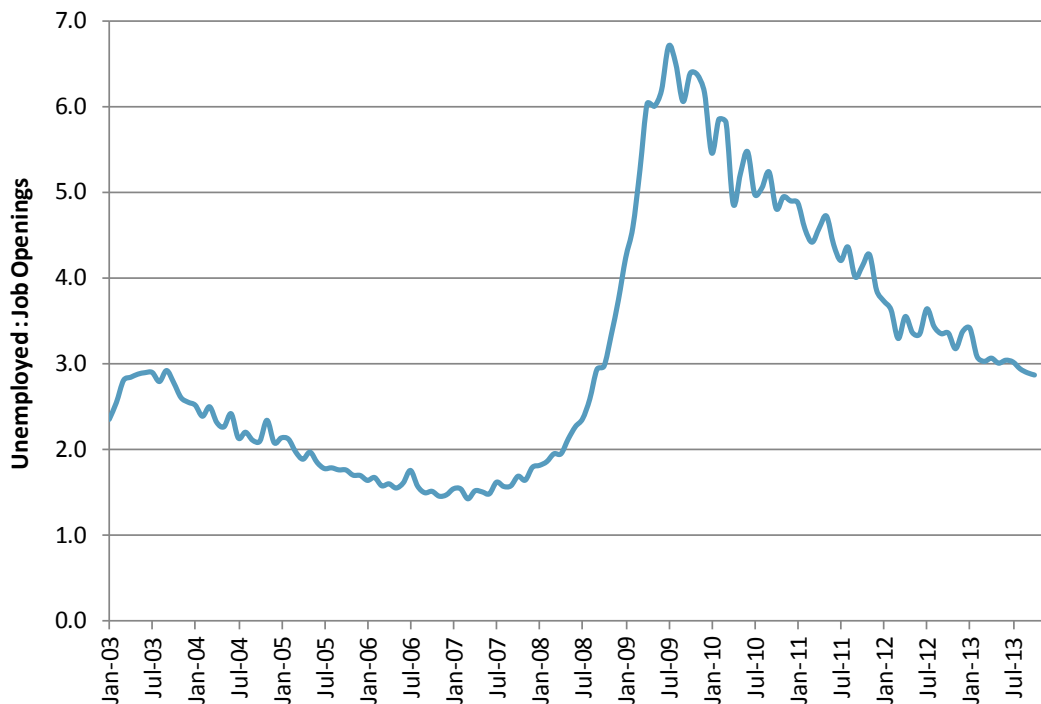
3.3. Unemployment, continued

to its trend decline. Recessions are generally short-lived and quick rebounds to prerecession levels of economic activity are common. This has certainly not been the case with the Great Recession and unemployment statistics.

Another long-term pattern is revealed in Figure 3.6, notably the lower labor force participation rate of Tennessee compared to the nation. There are several possible explanations for this persistent trend. One is that various measures of health status (e.g. obesity and prescription drug use) for Tennessee are less attractive than for the U.S. Tennessee also has a more poorly educated workforce and those with lower levels of attainment tend to have lower labor force participation rates.

Historical and projected annual unemployment rates (U-3) for the nation and state are illustrated in Figure 3.7. The near-term spike in Tennessee is consistent with what was observed over the course of 2013. The state's higher rate of unemployment is expected to be sustained through the remainder of the decade and in to the 2020s. By 2023, the state unemployment rate is expected to reach 5.5 percent compared to 5.1 percent for the nation. This differential is slightly smaller than the wedge that prevailed in 2013 when the state rate averaged 8.2 percent and the national rate averaged 7.4 percent.

Figure 3.5. Number of Unemployed Persons per Job Opening Slowly Returning to Prerecession Levels

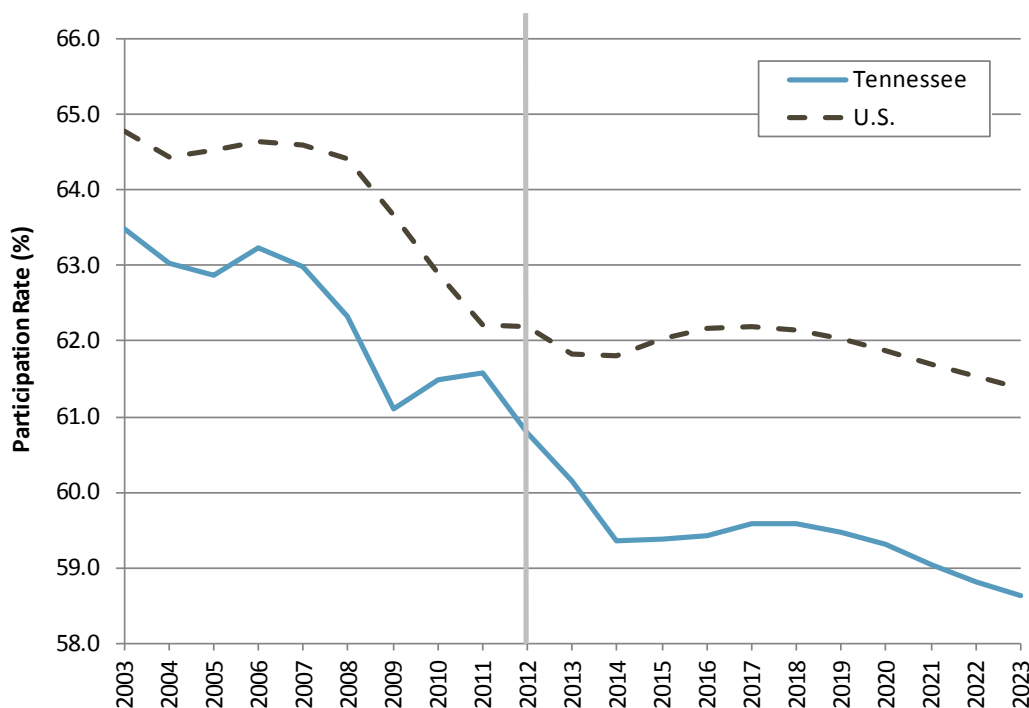


Seasonally adjusted data for the U.S.

Source: Bureau of Labor Statistics, Current Population Survey, and Job Openings and Labor Turnover Survey, Dec. 10, 2013.

3.3. Unemployment, continued

Figure 3.6. Labor Force Participation Rates Take Unprecedented Dip



Source: Bureau of Labor Statistics; IHS Global Insight, Inc.; and UT-CBER.

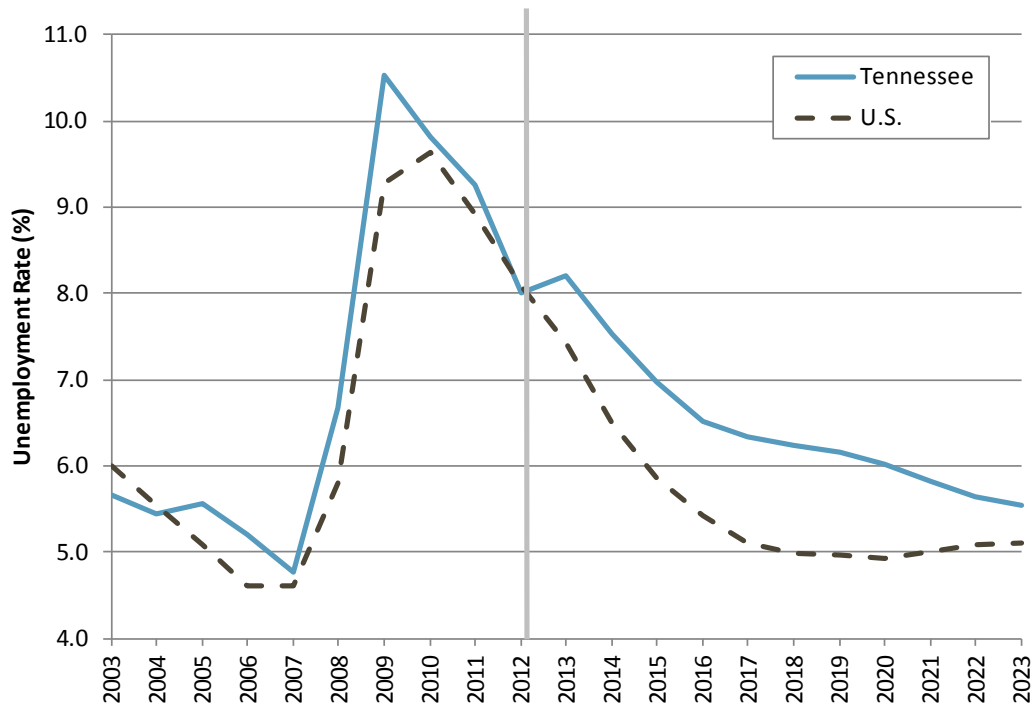
The Different Types of Unemployment

The BLS calls the type of unemployment people experience between separation from one job and the beginning of another *frictional unemployment*. Frictional unemployment is generally considered a short-term issue and exists in even the healthiest economies. Policy intended to reduce frictional unemployment might include labor market information to help match prospective workers with employers. *Structural unemployment*, on the other hand, occurs when a worker's skills are not a match for available jobs; it is more worrisome to economists and policymakers as it has the potential to become a long-term issue. The structurally unemployed also include people whose jobs have been made redundant as technology evolves to replace them. A subset of structural unemployment is *seasonal unemployment*. Seasonal unemployment occurs when a position becomes extraneous because of the time of year, and illustrates another component of structural unemployment: that it is attributable to changes in demand. The seasonally unemployed may include temporary hires in the retail sector looking for work at the end of the holiday season, or camp counselors whose jobs end with the summer. Retail trade and leisure and hospitality services will often account for a significant share of seasonally-unemployed workers.

The aforementioned three types of unemployment make up what economists call the natural or full-employment rate of unemployment. The reason is that these types of unemployment will generally exist even in a very healthy economic environment. Importantly, the natural rate excludes *cyclical unemployment*, which emerges as the result of a downward trend in the business cycle. Reducing cyclical unemployment is a target of fiscal and monetary stimulus which is intended to increase the demand for goods and services and thus workers. Cyclical unemployment, like structural unemployment, seldom becomes a long-term problem. As with structural unemployment, the longer a worker is unemployed the more his skills may deteriorate, such that it becomes difficult for him to find employment again.

3.3. Unemployment, continued

Figure 3.7. Annual Unemployment Rates Are Falling But Remain Elevated



Source: Bureau of Labor Statistics; IHS Global Insight, Inc.; and UT-CBER.

3.4. Population

Population changes reflect the net influence of births, deaths and migration. Tennessee's population grew 12.5 percent between 2003 and 2013 compared to growth of 9.0 percent for the nation. Tennessee's compound annual growth rate over this period was 1.2 percent and the national rate was 0.9 percent. Population growth for the state and nation is expected to slow between 2013 and 2023 and this will contribute to slower labor force growth as discussed above. The state will see population growth of 11.3 percent while the U.S. population will grow 8.0 percent.

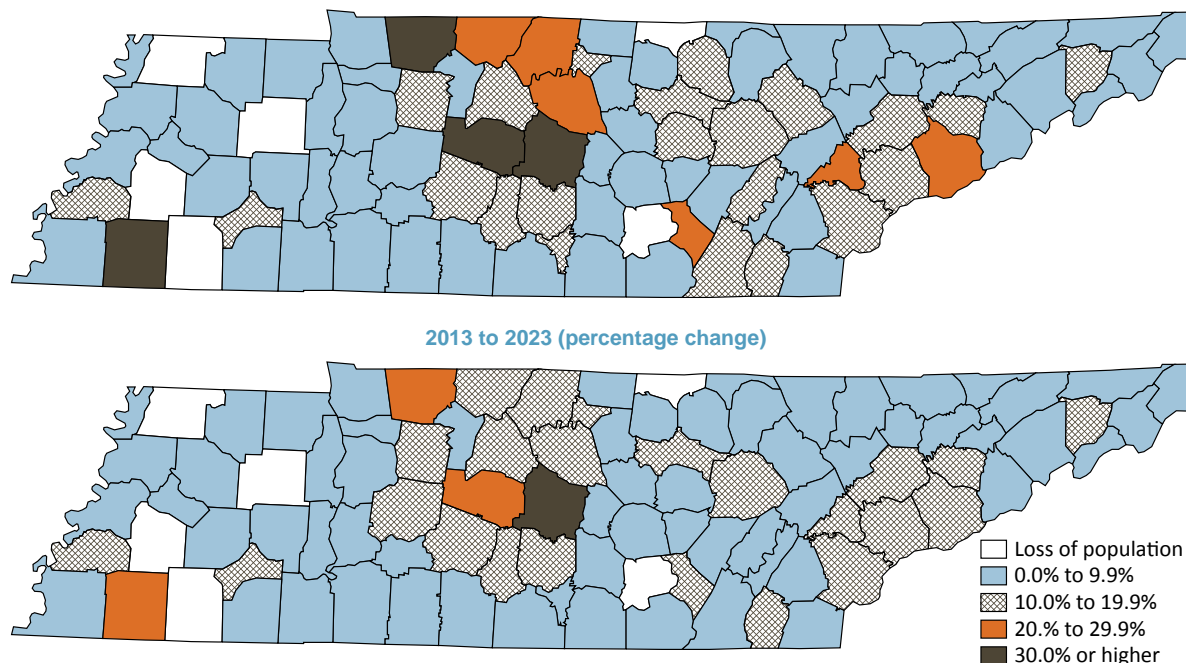
Figure 3.8 shows historical and projected population growth by county for 2003-2013 and 2013-2023. Fayette, Montgomery, Rutherford and Williamson Counties experienced dramatic growth in excess of 30 percent between 2003 and 2013.

Rutherford County's growth was the strongest at 42.6 percent yielding 86,740 new people. Obion, Haywood, Hardeman, Carroll, Grundy and Clay Counties all witnessed population contraction as a result of net outmigration.

Rutherford County is projected to see the strongest rate of population growth by 2023 with an overall gain of 33.5 percent and compound annual growth of 2.9 percent. This will mean 97,262 additional residents by 2023. Montgomery, Williamson and Fayette Counties will also see strong population growth in excess of 20 percent. Consistent with the pattern described above, Obion, Haywood, Hardeman, Carroll, Grundy and Clay Counties will once again experience a decline in population.

3.4. Population, continued

Figure 3.8. Tennessee Population Growth
2003 to 2013 (percentage change)



Source: Census Bureau and UTCBER.

3.5. Interest Rates and the Price Level

Interest rates dropped rapidly in the early 2000s due to sluggish growth and monetary policy stimulus. In 2007, interest rates had risen substantially, with the federal funds rate standing at 5.0 percent and the prime interest rate at 8.1 percent. Aggressive action by the Federal Reserve pushed the federal funds rate to 0.2 percent in 2008. Interest rates have remained low as a result of the Federal Reserve and ample liquidity in the financial system.

Interest rates should continue their slow ascent for the next several years. The Fed's tapering, which has just begun, will primarily affect mid-to-long-term rates. The federal funds rates, which has a greater impact on short-term rates, is likely to begin rising in 2015 assuming a healthy labor market. The 30 year fixed mortgage rate will inch upward and reach 7.0 percent in 2018. Higher

interest rates are not likely absent a spike in inflation.

Inflation has shown only modest growth in the last decade. The consumer price index (CPI) did surpass 3 percent in 2005, 2006 and 2008. However, it also contracted in 2009. There have been ongoing concerns dating back to 2008 that the Federal Reserve's aggressive monetary policies—including a low federal funds rate and various rounds of “quantitative easing”—would lead to rapidly escalating prices. Such spikes have not been realized. There are several explanations, including weak demand for credit, tighter lending standards, weak growth in consumer demand and the absence of cost-push pressures from the labor market.

Concerns regarding disinflation (lower growth in the price level) and deflation persist. Competitive

3.5. Interest Rates and the Price Level, continued

pressures in product markets and labor markets are the source of these concerns. Deflation could have devastating consequences. If businesses and consumers expect lower prices tomorrow, producers may reduce production and consumers may delay purchases. Of course such a psychology could lead to further production and consumption delays. This could potentially lead to another serious economic downturn.

Moderate inflation rates will characterize the

long-term outlook. The CPI is expected to rise above 2 percent in only two years of the long-term outlook window. The chained price index and the personal consumption deflator will both remain consistently below 2 percent for the remainder of the decade. Should inflation accelerate, expect aggressive actions by the Fed to forestall further price increases and re-establish its reputation in combatting inflation.

3.6. Income and Output

Personal income is an important measure of economic activity as it reflects income earned by Tennesseans from all sources, regardless of where one works. (Income for a non-resident worker or entrepreneur in Tennessee accrues to the state of residence.) Tennessee's nominal personal income was up 48.8 percent between 2003 and 2013 yielding compound annual growth of 4.1 percent. Compound annual growth for the nation came in at the same 4.1 percent rate. Income growth was hit hard by the Great Recession, including an unprecedented decline in personal income in 2009. Per capita income in Tennessee was up at a 2.9 percent compound annual rate versus a much stronger 3.2 percent rate for the nation. Tennessee's per capita income was 90.1 percent of the national average in 2003 but slipped to 88.2 percent of the national average by 2013.

In Tennessee the strongest-growing component of personal income between 2003 and 2013 was transfer payments, with a compound annual gain of 6.4 percent. Rent, interest and dividend income was up 4.4 percent, proprietors' income advanced 3.6 percent and wage and salary income grew 3.2 percent.

Nominal personal income in Tennessee is projected to see compound annual growth of 4.4 percent between 2013 and 2023. Income growth for the U.S. is expected to be stronger at

4.7 percent. Per capita income growth for the nation will exceed per capita growth in Tennessee. By 2023, Tennessee's per capita income will have fallen below 84 percent of the national average.

Inflation-adjusted state GDP barely grew in 2007 and 2008 and suffered a 3.7 percent setback in 2009. (U.S. GDP fell at the slower rate of 2.8 percent in 2009.) Between 2003 and 2013, inflation-adjusted state output was up at a meagre compound annual growth rate of only 1.5 percent compared to 1.7 percent for the national economy. Output growth in the state's manufacturing sector advanced by less than 1 percent over the past ten years and output levels for both durable and nondurable goods have still not returned to their prerecession peak established in 2006. The only sectors of the state economy that have seen a full restoration of output levels are retail trade, information, financial activities, education and health services and leisure and hospitality services.

Looking forward to 2023, U.S. GDP is expected to be up at a 2.7 percent compound annual growth rate while the state will experience 2.6 percent growth. The state's manufacturing sector will engineer output growth of 2.8 percent despite the fact that employment levels in 2023 will trail employment levels in 2013. Output in durable goods manufacturing will advance 3.6 percent versus 1.5 percent growth for nondurable goods.

CHAPTER 4: PROMOTING ADVANCED MANUFACTURING CLUSTERS IN TENNESSEE¹

In this chapter—

- | | |
|--|---------------------------------------|
| 4.1. Introduction | 4.7. High-Wage clusters |
| 4.2. Context: Trends in Tennessee Manufacturing | 4.8. Well-Established clusters |
| 4.3. Advanced Manufacturing | 4.9. High-Potential Clusters |
| 4.4. Clusters and Harvard's Cluster Mapping Project | 4.10. Aspirational Clusters |
| 4.5. Tennessee Manufacturing Clusters | 4.11. Conclusion |
| 4.6. Narrowing the Set of Target Industries: Identification of Potential Clusters for Expansion | 4.12. Appendix |
| | 4.13. References |

4.1. Introduction

The University of Tennessee's Center for Industrial Service (CIS) has a vision for a Tennessee manufacturing industry that is characterized by innovative and prosperous businesses, high-quality jobs, and a safe and healthy workplace. CIS seeks to identify and facilitate growth among advanced manufacturing industries in order to promote the economic well-being and fiscal health of Tennessee. Fostering

economic growth requires a high-quality business environment that encourages innovation and rising productivity (Porter, 2001). Consequently, a focus on the development of advanced manufacturing, which is characterized by a higher educated workforce and higher rates of process innovation, may be one of the more direct routes towards further growth and prosperity.

Advanced manufacturing firms may also yield

¹This report is supported by the University of Tennessee Center for Industrial Services, with funding from the University Center Program, Economic Development Administration; and the Manufacturing Extension Partnership Program, National Institute for Standards and Technology.

4.1. Introduction, continued

spillover benefits to the state. For example, the presence of advanced manufacturing firms can send important signals regarding the strength and vitality of the state's economy. In addition, advanced manufacturing enterprises can attract a larger pool of high-skilled workers and raise expectations for in-state workers and educators. Tennessee has consistently lagged behind the nation in educational attainment rates, average earnings and household income, all of which are strong indicators of regional demand and economic development. Creating new jobs in advanced manufacturing fields may provide incentives for higher educated workers to relocate to Tennessee and more importantly give stronger incentives to Tennessee residents to seek further education and training.

In practice, conceptual definitions associated with advanced manufacturing, along with practical data constraints, make it exceedingly difficult to identify advanced manufacturing industries and firms. This chapter uses a process-oriented definition of advanced manufacturing that allows for indirect identification of firms and industries based on the earnings that accrue to workers. More productive workers generally receive higher wages and are often employed in more advanced production processes, so this approach has considerable intuitive appeal. A regional (i.e. statewide) cluster-based approach is also used in the identification of advanced manufacturing industries.

The cluster approach yields four candidate sets of industries that warrant consideration for policy support and technical assistance. The first, the *high-wage cluster*, is the one that is most closely related to the notion of advanced manufacturing by virtue of the very high earnings that accrue to workers. Also identified is a *well-established cluster* of firms and industries that pay relatively high wages and account for a large share of employment in the state. A *high-potential* and an *aspirational cluster* are also examined. The high-potential cluster is characterized by high earnings but a very small share of national employment. The large national employment level may offer the potential for the transferal of jobs to Tennessee. The aspirational cluster includes firms that pay relatively low wages and could benefit from productivity-enhancing business practices. This cluster is *not* indicative of advanced manufacturing. But given the strong presence in the state, the application of advanced manufacturing practices may enhance productivity and competitiveness.

The remainder of the chapter is organized as follows. The discussion immediately below frames the state of the manufacturing sector in Tennessee. Next is a discussion of the nature of advanced manufacturing followed by a presentation of core concepts of cluster analysis. Subsequent sections provide data and commentary on the nature of the four sets of clusters.

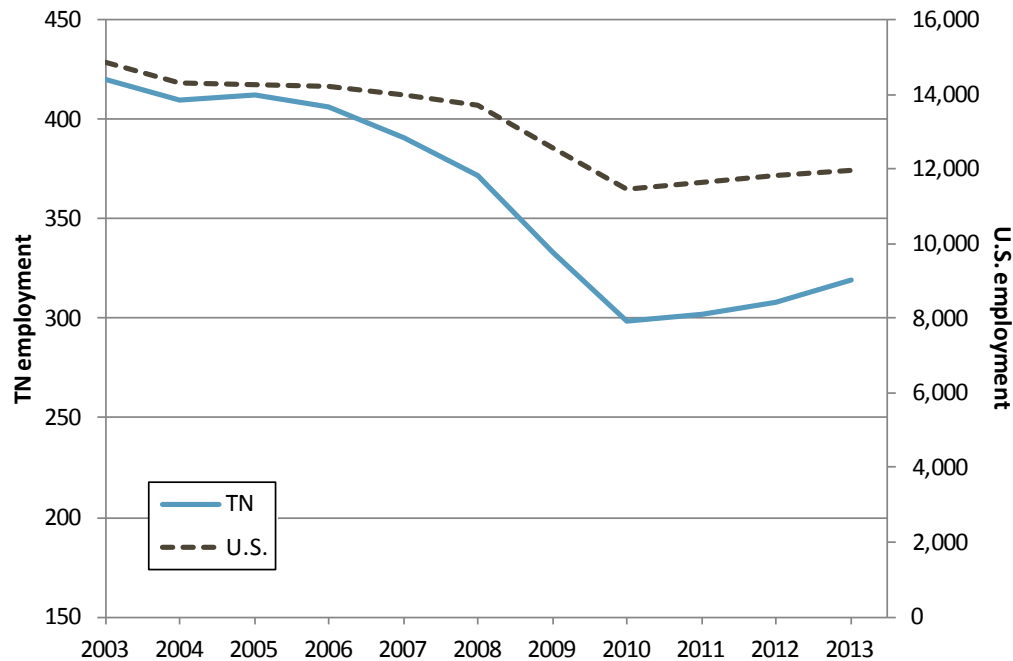
4.2. Context: Trends in Tennessee Manufacturing

Over the last decade the number of manufacturing jobs in Tennessee and in the U.S. has declined sharply. The Great Recession hit the manufacturing industry noticeably hard. From 2007 to 2010 over 2.7 million manufacturing jobs were lost in the U.S., 100,000 of which came from Tennessee. Manufacturing employment has slowly begun to bounce back (in both Tennessee and the U.S.) but is nowhere near pre-recession levels

(Figure 4.1). Unfortunately, while job growth in manufacturing is expected to continue for the next several years, the gains will not erase the losses that have transpired since 2007. Before the end of the decade, manufacturing will once again experience employment losses. A primary explanation is the expectation that manufacturing output levels will have been restored well above prerecession levels of production. Once the manufacturing sector

4.2. Context: Trends in Tennessee Manufacturing, continued

Figure 4.1. U.S. and Tennessee Manufacturing Employment Enjoys Short-Term Rebound
(in thousands)



Source: Bureau of Economic Analysis.

returns to something akin to full employment, trend contraction will again set in.

Manufacturing has long played a vital role in the Tennessee economy. By 2003, manufacturing employment represented 14.6 percent of total nonfarm employment in the state (compared to 10.5 percent in the country.) However, Figure 4.2 shows that manufacturing's employment share has been on the downswing ever since. In fact, manufacturing employment approached one-third of all jobs in the state in the 1960s and 1970s so the trend shown in Figure 4.1 understates the long-term losses for the state.

Despite these bleak employment figures, manufacturing output has expanded in recent years, and is nearing pre-recession levels as shown in Figure 4.3. Figures 4.1 and 4.3 together indicate significant gains in manufacturing productivity, i.e. output per worker, as fewer and fewer workers have been able to produce more and more output. This has largely been driven by rapid technological progress during the late-20th and early-21st century

along with industry requirements for better skilled workers—industry technology and the need for skilled workers go hand-in-hand. Advancements in computer technology, for example, have made product development, shipping, and inventory management easier and more efficient, while the emergence and expansion of the internet has made communication between buyers and sellers easier and more reliable. These developments have streamlined the manufacturing process from start to finish, resulting in reduced production costs and increased productivity.

Historically Tennessee's industrial labor pool was both abundant and unskilled. That has changed markedly in recent years as the industry has increasingly shifted its demand to highly-skilled workers. Technological advancements have also helped create a more globalized economy which has given manufacturing firms the opportunity to extend business into overseas markets. This same globalization has also led to greater foreign competition both in domestic and international

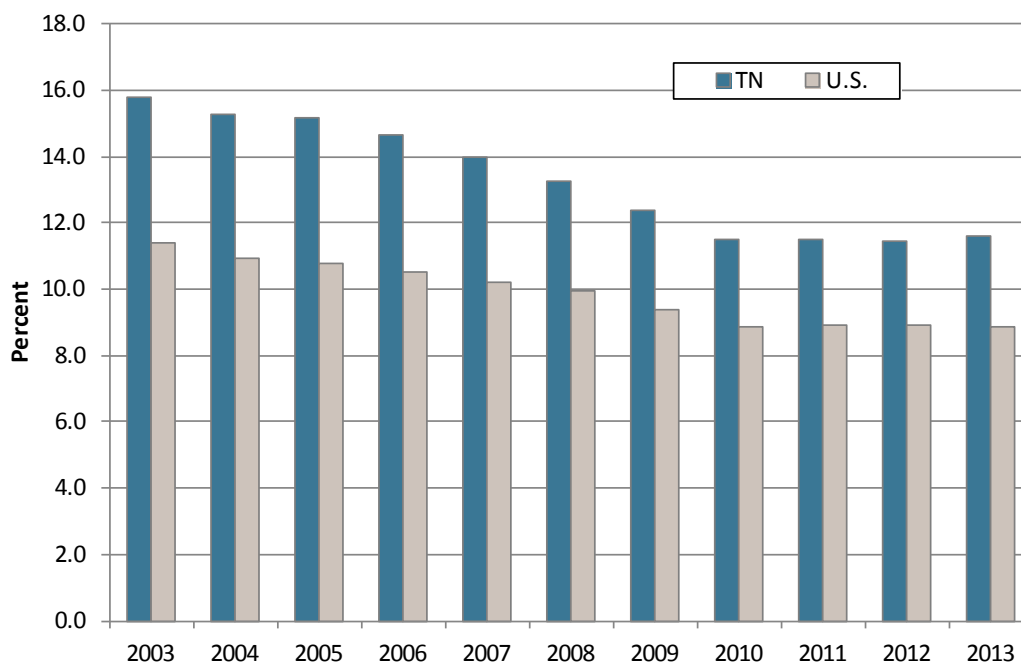
4.2. Context: Trends in Tennessee Manufacturing, continued

markets. Countries such as Brazil, China, India, and Russia, for example, have all become stronger economic forces in the global marketplace and represent additional competition for firms in the U.S. and in Tennessee.

In years past, lower input prices (such as lower wages and lower costs for land) were, to some degree, viewed as an asset for southern states such as Tennessee, as it helped lure cost-minimizing firms into relocating within the state's borders. However, with globalization, firms have found even cheaper labor overseas (in countries such as China), and states such as Tennessee will need to

find new ways to compete. This should be viewed as an opportunity for Tennessee to continue to transform its workforce from a low-cost labor force to one of high quality and higher skills. While low wages may have helped attract some new firms into the state they have also been a burden to the Tennessee economy by keeping consumer income low and dampening regional demand. Focusing on increasing the skill level of the region's workforce through advanced education and training could greatly benefit the region's economy by increasing productivity and putting upward pressure on employee wages.

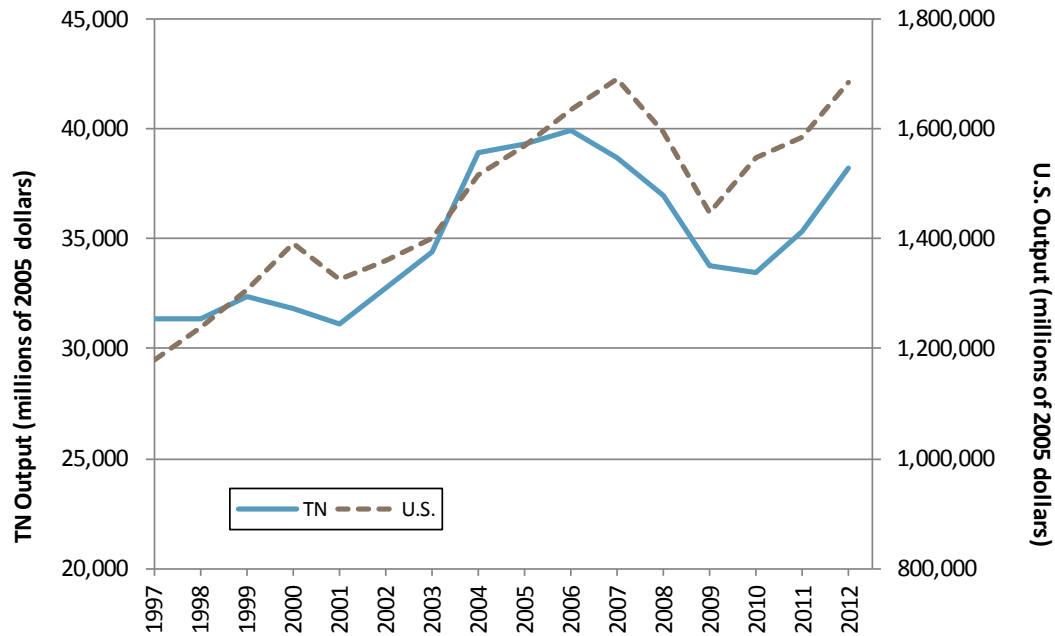
Figure 4.2. Manufacturing Employment as Share of Total Nonfarm Employment Trends Downward



Source: Bureau of Labor Statistics.

4.2. Context: Trends in Tennessee Manufacturing, continued

Figure 4.3. U.S. and Tennessee Manufacturing Output Trend Upward



Source: U.S. Bureau of Economic Analysis.

4.3. Advanced Manufacturing

Advanced manufacturing represents one important component of the state's overall manufacturing sector. However, a number of difficulties immediately arise when attempting to identify advanced manufacturing industries for developmental consideration. First, is the burden of defining what exactly constitutes *advanced manufacturing*. As noted in Waldman and Murray (2013), it is difficult to find a fully accepted definition of advanced manufacturing because the term "advanced" is, by nature, both relative and changing. For example, something may be advanced in one industry while rudimentary in another, and what is considered advanced today may be obsolete tomorrow. In addition, there is some "advanced" dimension to the activities of virtually any business enterprise. Furthermore,

there is some debate as to whether advanced manufacturing should be a product-oriented definition or a process-oriented one. If "advanced" is defined by the product then some sectors such as electronics manufacturing might be considered advanced while other traditional fields like steel production might be considered non-advanced. However, the use of advanced technologies and automated processes are also present in "traditional manufacturing" industries such as textiles and steel manufacturing, and therefore a product-oriented definition might be too narrow.

Following the work of Waldman and Murray (2013), advanced manufacturing is defined as "the application and integration of innovative technologies, materials, and processes to the production of manufactured products (p. 15)."

4.3. Advanced Manufacturing, continued

This definition should capture most advanced product industries because of their heavy reliance on R&D (an innovative process) and is also suited to capture advanced processes that use innovative technologies to efficiently manufacture seemingly basic products. Thus, a process-based definition may allow for a broader range of industries to fall into the header of advanced manufacturing.

A second difficulty arises in devising a systematic strategy for identifying which advanced manufacturing industries are good candidates for potential development. One possibility would be to identify advanced manufacturers at the industry level by using wages or output per worker as a proxy. This approach has considerable intuitive appeal since most advanced industrial processes will require a skilled workforce and skilled workers are well paid. In general, output per worker will be highly correlated with worker earnings.

Alternatively, a cluster-based approach, which has become increasingly popular among policymakers and regional economists, can also be used (Porter, 1998). Clusters are groups

of industries that are co-located in a specific geographic region and related to each other through common externalities such as a reliance on workers with similar skills, the use of similar inputs, or because they provide related goods and services through the supply chain (Porter, 2003). (It is important to recognize that firms do not need to be engaged in direct trade with one another to be part of the same industrial cluster.) We choose to identify advanced manufacturers through this cluster-based approach because, from a regional perspective, it would be more beneficial to expand an entire cluster of industries rather than one industry within a cluster. Clusters represent interconnected sets of firms or industries where the benefits of one firm can help all industries within the cluster both directly (via supply chain benefits) and indirectly (via agglomeration or the externalities noted above.) Therefore being able to identify and potentially expand an entire cluster can have potentially profound effects on a regional economy.

4.4. Clusters and Harvard's Cluster Mapping Project

The cluster approach used here makes use of cluster mapping data from the Harvard Cluster Mapping Project, and helps us obtain a comprehensive picture of all manufacturing industries present across the state of Tennessee. The U.S. Cluster Mapping Project is a federally-funded endeavor led by Michael Porter from the Institute for Strategy and Competitiveness at the Harvard Business School in collaboration with the U.S. Department of Commerce. Their initiative is to identify and characterize regional clusters in order to help build connections within and between industries and facilitate economic growth among regional economies. Major contributions of the project include the development of a comprehensive public database and a user-friendly interface to help policymakers identify and understand industry clusters within a region. Porter has also developed a systematic approach to define

which industries are categorized into each cluster (Porter, 2013).

Porter classifies clusters into three broad types of industries based on locational characteristics and competitiveness. First, there are *local industries* which primarily supply goods and services to the local market or region in which they are located. Local industries only compete in limited ways with industries in other regions and employment is roughly proportional to the regional population. These clusters are in large part comprised of service industries such as health services, hospitality establishments, and utilities, but some non-service industries such as food and beverage processing and construction are also characterized as local.

There are also *natural endowment* (or resource dependent) industries which are industries located where the needed natural resources are found.

4.4. Clusters and Harvard's Cluster Mapping Project, continued

These industries can compete with other regions as well as internationally. Examples include mining, forestry, and water transportation industries.

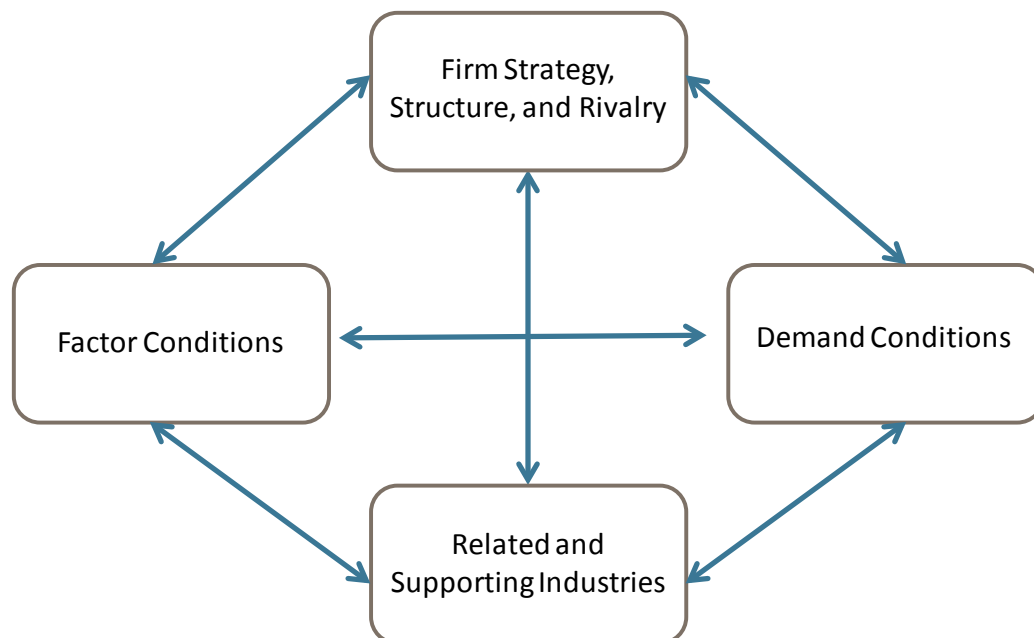
Finally, there are *traded industries* that are not resource dependent. These industries supply goods and services across the country as well as internationally—i.e. they export their output to other regions. Traded industries base their location decisions on a variety of competitive considerations, including labor costs, worker productivity and spatial logistics, and consequently employment concentration can vary significantly across regions. Examples of traded industries include metal manufacturing, information technology, and biopharmaceuticals.

According to Porter (2000) the presence and strength of these various types of industries (local, natural endowment, and traded) is determined by the region's business environment which can be exemplified by four broad areas: factor conditions; demand conditions; firm strategy, structure, and rivalry; and related and supporting industries

(Porter, 2000). Figure 4.4 illustrates this concept using Porter's diamond model.

It is important to understand how these aspects can impact the local business environment and how policymakers can improve market conditions through these four facets of the region. "Factor conditions" refer to the regional supply of productive assets such as skilled human resources, physical infrastructure, raw materials, research institutions, and sources of financial capital. High-quality factor conditions can directly improve the region's business environment by enabling firms to become more efficient and more competitive. There are a number of tools that policymakers can use to upgrade the factor conditions of a region. Examples include, but are not limited to, promoting education and setting rigorous standards for teacher qualification, providing direct support to research institutions, incentivizing employee training programs and developing venture capital initiatives. Factor conditions can also be improved by support institutions

Figure 4.4. Michael Porter's Diamond Model Points to Four Factors Affecting Clusters



4.4. Clusters and Harvard's Cluster Mapping Project, continued

such as CIS which offers technical assistance to manufacturing firms in a range of performance, growth and sustainability areas.

“Firm strategy, structure, and rivalry” refers to the rules and norms governing local competition. Within this realm, policymakers could improve the business environment by establishing regulations that encourage competition such as tax incentives for capital investments and flexible labor policies.

“Demand conditions” refer to the wants and needs of the local consumers. Stronger demand conditions can stimulate the regional economy and

foster growth among local companies. Well-defined consumer protection laws, incentives for customers to become early buyers of new products, and export promotion are ways in which policymakers can stimulate the demand conditions of a region.

Finally, “related and supporting industries” refers to the local suppliers of a region. According to Andersson et al. (2004), “[having] a strong network of suppliers and related industries can increase efficiency and quality through frequent and quick flows of communication ... and innovations” (Anderson, p. 160).

4.5. Tennessee Manufacturing Clusters

The starting point for the analysis is identification of Tennessee manufacturing clusters using the U.S. Cluster Mapping Project database and Porter's methodology. In the following sections, the discussion shifts to the consideration of factors and data that may help more narrowly identify advanced manufacturing clusters.

A total of 66 clusters were identified in Tennessee in 2011. The cluster mapping database uses data from the U.S. Census Bureau's County Business Patterns dataset, and currently utilizes data from 1998 up to 2011. In 2011 Tennessee's total nonfarm employment was roughly 2.3 million workers or approximately 2.0 percent of national employment. The average wage was \$39,896 a year, which was 12.4 percent lower than the national average. One caveat about the 2011 data is that it is likely contaminated, to some extent, by the Great Recession. The Great Recession led to significant structural changes in the national and state economies and restructuring continues to take place. As such, it would be useful to revisit this application again once the economy has stabilized from the recession.

The 66 clusters that are identified represent employment in Tennessee and include workers from service industries as well as other nonmanufacturing sectors such as hospitality and

tourism, education, and health services. (While the clusters are based on regions, in practice the region is defined as the state.) The analysis here, however, focuses only on manufacturing industries, and therefore any nonmanufacturing clusters are disregarded. As a result 21 nonmanufacturing clusters are dropped from the sample. In addition, nine smaller clusters are dropped from the sample due to missing data. A list of the 30 clusters excluded from analysis is presented in Appendix Table A.4.1. This leaves a total of 36 manufacturing clusters in Tennessee, 30 of which are considered traded clusters, 3 are local, and 3 are resource dependent (i.e. natural endowment). A list of the manufacturing clusters is presented in Appendix Table A.4.2. Total employment in the manufacturing clusters was 564,192 workers in 2011, representing 24.0 percent of Tennessee's total employment. As a supplement to the cluster mapping data we also analyze employment data from the Bureau of Economic Analysis (BEA). Due to the use of Porter's cluster definitions the employment numbers listed above are slightly higher than the manufacturing employment figures listed in the BEA data, (as shown in Figure 4.1, page 55). This occurs because many of the “manufacturing” clusters contain some service industries which would not be counted in the

4.5. Tennessee Manufacturing Clusters, continued

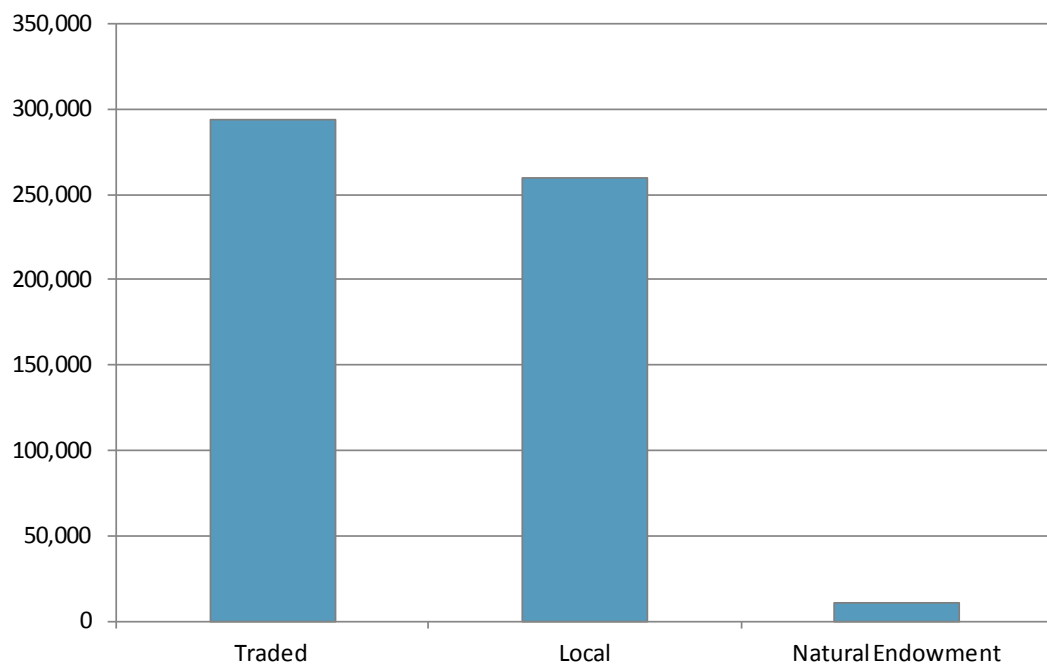
BEA manufacturing data. For example, the local real estate, construction, and development cluster contains the concrete manufacturing industry but also real estate services and general contractors which are not (and should not) be counted as manufacturing employment in the BEA data. Similarly, the information technology cluster contains computer manufacturing and software development but also communications services, a nonmanufacturing industry.

While there are only three local manufacturing clusters in the state, these local clusters account for approximately 46.0 percent of manufacturing employment in Tennessee (Figure 4.5). We are much less interested in these clusters because they are not directly involved in production for export. The traded clusters account for 52.0 percent of Tennessee's manufacturing employment, and the natural endowment clusters account for the remaining 2.0 percent. Although the local industries account for a large portion of employment, strength in the traded industries

is most essential for prosperity based on the cluster framework (Porter, 2003) as well as basic export-driven models of regional economic development. The average wage in a region, which is a fundamental indicator of economic performance, living standards, and work skills, was \$49,945 among traded industries in Tennessee but only \$33,406 for the local industries. (It should be noted that both of these are lower than their respective national averages—the same 30 traded industries had a national average wage of \$56,677 and the three local industries had an average wage of \$36,983.) Given that employment in the traded industries makes up more than half of Tennessee's manufacturing workforce, and employees in the traded industries get paid, on average, 50.0 percent more than local employees, it seems evident that having a strong traded sector is vital for economic prosperity.

The prosperity of a region however, depends on the productivity of all industries in that region, and therefore policymakers should not neglect

Figure 4.5. Total Employment in Tennessee by Type of Manufacturing Cluster



Source: U.S. Cluster Mapping Project.

4.5. Tennessee Manufacturing Clusters, continued

local clusters in order to bolster traded ones. The local economy is composed in large part of industries that provide services to the traded clusters (e.g. utilities, transportation, and wholesale trade). Therefore, an inefficient local economy can increase the cost of doing business for the entire region and become a drag on the economy. Thus, strong local clusters support the success of nearby traded clusters. The converse is also true, strong traded clusters can be a boon to the local economy.

As traded industries become more productive they will require more support services, thereby creating more jobs in the local economy. Furthermore, Porter (2001) finds that higher wages in traded clusters tend to pull up the wages in the local clusters. While the discussion that follows focuses mostly on traded clusters, a broad economic development strategy would focus on a wider array of business enterprises.

4.6. Narrowing the Set of Target Industries: Identification of Potential Clusters for Expansion

As indicated earlier there are some difficulties in defining the term advanced manufacturing. Even with a definition in hand it is also difficult to determine the profile of an advanced manufacturing cluster. For one, advanced manufacturing is a continuum that is both ever-changing and subjective. Secondly, there are little to no data on production processes or capital investments, even at the national level, though both are distinguishing characteristics of an advanced manufacturing cluster. On the other hand, there are data on each cluster's average earnings which is used here as a proxy for identification of advanced industries. The basic rationale is that higher paid workers tend to be more skilled (via formal schooling and/or on-the-job training) and thus more productive. At the same time, industries with higher wages tend to invest more in R&D as well as their overall capital stock. Therefore, clusters with higher paid workers will more likely resemble advanced manufacturers. Aerospace engines manufacturing is a good example of a cluster with a high paid/high skilled workforce. Among other things, aerospace engineering deals with the research, design, and development of air and spacecraft. Working in this field requires advanced knowledge in physics, calculus, trigonometry, and other advanced mathematical topics, and most entry-level aerospace engineer positions require at least a bachelor's degree. In 2011 the average wage

for an aerospace engineer in the U.S. was almost \$70,000, which was significantly higher than the national average salary of \$45,230 in 2011.²

In this section four different strategies are discussed that are used to identify manufacturing clusters in Tennessee. These clusters, if nurtured and expanded, could promote greater competition and productivity across the region. Results and insights are presented from each of these approaches. For some of the more established clusters, maps of Tennessee are presented which show where firms of a particular type choose to locate within the state. The U.S. Cluster Mapping Project provides detailed maps at both the national and state levels, but does not provide any micro-level data within a state's borders. Therefore, the data used to create these maps were gathered from the 2011 County Business Patterns survey administered by the U.S. Census Bureau. In the County Business Patterns database each data point is measured at the industry-level and industries are well defined via NAICS codes. Conversely, the U.S. Cluster Mapping data are measured at the more aggregate cluster-level and each cluster contains several industries, each of which has its own unique NAICS code. As a result, there may not be an exact one-to-one relationship between a cluster as defined in the cluster mapping data and a

²Bureau of Labor Statistics, Occupational Employment and Wages News Release – May 2011.

4.6. Narrowing the Set of Target Industries: Identification of Potential Clusters for Expansion, continued

respective industry in the Census data; nonetheless these maps still provide useful information with regards to firm location.

In the first strategy the focus falls on identifying *high-wage clusters*, i.e. the clusters which will most closely align with advanced manufacturing. The high-wage clusters are characterized by an average wage that was greater than \$70,000 in 2011. This was at least 75.0 percent larger than Tennessee's average salary of \$39,896 per year in 2011. Increasing job growth among high-wage clusters will certainly have a positive impact on regional income. Moreover, creating new jobs in these high-wage clusters may attract a more educated and higher skilled workforce into the region which could help foster innovation and productivity gains.

In the second strategy the focus is on identifying *well-established clusters*. The well-established clusters are characterized by a relatively high average wage and a relatively large workforce. The latter is measured using both the absolute number of workers in the cluster as well as the cluster's share of national employment. As a general cut-off point, a cluster's regional workforce must account for roughly 2.0 percent of the cluster's national employment to be considered well-established. These clusters can be viewed as having a good footing in the Tennessee economy and a labor force comprised of higher paid workers. Porter (2003) noted that cluster strength is a strong driver of regional performance and that focusing on established clusters can offer the greatest potential for short-term economic growth. Furthermore, Delgado, Porter, and Stern (2010) found higher rates of new business formation and start-up employment in regions with stronger clusters. Therefore, strengthening established clusters may have a type of multiplier effect whereby increasing employment will not only create new jobs but may also attract new businesses into the region, either

directly via the supply chain or indirectly through agglomeration spillovers.

As a third strategy we focus on the clusters with the greatest potential, which are labeled *high-potential clusters*. These are clusters with a high average wage but small share of the national workforce. These clusters are very productive, and their workers receive high wages, however due to their small size, the overall impact of these clusters on a regional economy is typically small (Porter, 2001).

Finally, as a fourth strategy we focus on identifying *aspirational clusters* which may need additional support in order to foster growth and greater competition. These are low-wage clusters that may or may not yet be well established in the region. By virtue of being low wage, these clusters do not reflect advanced manufacturing. As such, they are considered aspirational in the sense that policymakers should aspire to making these clusters more advanced for the betterment of the workers, firms, and the region as a whole. The prosperity of a region depends on the productivity of all its industries and not just the performance of the strongest clusters. If a region only focuses on developing its stronger clusters it can become more susceptible to the booms and busts of the business cycle through greater reliance on a subset of the overall economic portfolio. For example, in the 19th and early-20th century Pittsburgh was primarily driven by the steel industry. The raw materials needed for making steel: iron ore, coal, and limestone were all found locally in Pittsburgh. By the 1920s Pittsburgh produced roughly one third of the nation's steel output, and the regional economy was flourishing. However, in the 1980's there was a major downturn in the steel industry and as a result the Pittsburgh economy experienced a deep recession and a long-term structural adjustment.

4.7. High-Wage Clusters

Using the first strategy, six high-wage clusters are identified in Tennessee. Since average earnings are used as a proxy for advanced manufacturing, these high-wage clusters are most closely aligned with an advanced manufacturing niche in the state. Total employment in the high-wage clusters was 20,235 workers in 2011 and the

average wage was \$84,170. These clusters—nonmetal mining, aerospace engines, information technology, biopharmaceuticals, power generation and transmission, and aerospace vehicles and defense—along with basic characteristics are listed in Table 4.1. The composition of each cluster (into subclusters) is then presented in Table 4.2.

Table 4.1. High-Wage Clusters

	TN		U.S.		TN wage relative to U.S. wage
	employment	TN wages	employment	U.S. wages	
Nonmetal mining	2,616	\$108,749	55,814	\$57,965	1.88
Aerospace engines	140	\$93,369	79,667	\$69,170	1.35
Information technology	9,813	\$80,626	846,353	\$97,421	0.83
Biopharmaceuticals	4,880	\$76,732	247,797	\$73,113	1.05
Power generation and transmission	980	\$75,273	212,419	\$88,286	0.85
Aerospace vehicles and defense	1,806	\$70,271	327,453	\$82,676	0.85

Nonmetal Mining

The first high-wage cluster identified is the nonmetal mining cluster (e.g. coal, gemstones, and gypsum), which had an average wage of \$108,749 in 2011. In total there were 2,616 jobs in Tennessee's nonmetal mining cluster. This accounted for 4.7 percent of the nation's nonmetal mining workforce.

From 1998 to 2011 there was a net gain of 424 new nonmetal mining jobs in Tennessee, representing an expansion of 19.3 percent. This compares to a net drop in nonmetal mining employment of 20.2 percent in the nation. Thus, Tennessee's nonmetal mining labor force was growing despite a contraction across the country. Growth in the nonmetal mining cluster also came during a period when total

employment in Tennessee's manufacturing clusters contracted by 7.4 percent (between 1998 and 2011) and national manufacturing employment contracted by 19.3 percent. In 2011 Tennessee's nonmetal mining cluster applied for only one patent, but this accounted for 2.63 percent of the nation's nonmetal mining patents. The highest concentration of nonmetal mining firms was located in three East Tennessee counties: Cumberland County which is located in the Upper Cumberland Development District; Knox County, located in the East Tennessee Development District; and Sullivan County of the First Tennessee Development District (see Figure 4.6.)

While nonmetal mining is categorized as a high-wage cluster, we offer this important caveat. From 1998 through 2010 the average wage in

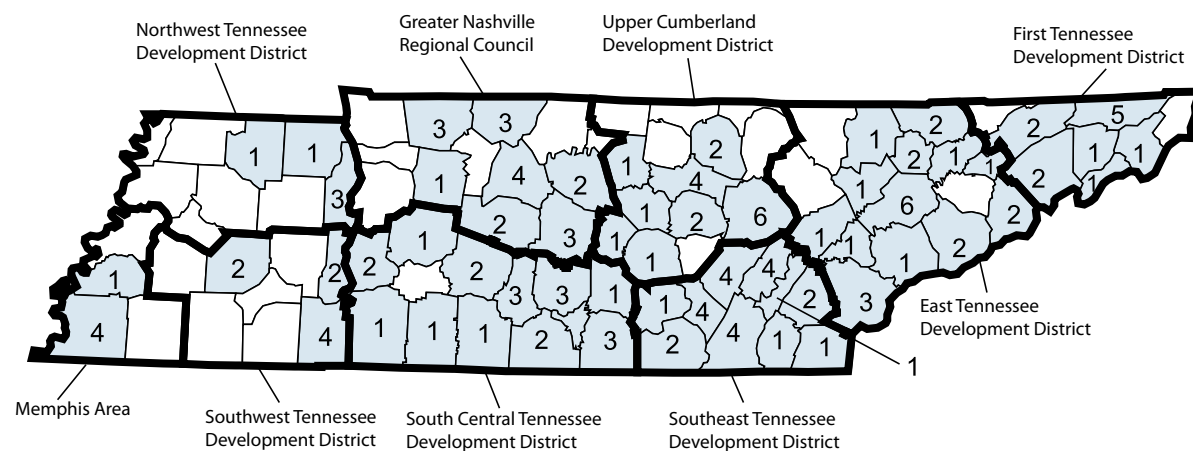
4.7. High-Wage Clusters, continued

Table 4.2. High-Wage Clusters and Subclusters

Cluster	Subclusters	Employment	Wage
Nonmetal mining	Nonmetal mining	2,589	\$115,197
	Nonmetal mining services	27	\$36,148
Aerospace engines	Small arms	130	\$93,369
	Aircraft engines	10	Not Disclosed
Information technology	Communications services	7,885	Not Disclosed
	Electronic components and assemblies	760	Not Disclosed
	Peripherals	594	\$46,576
	Software	564	\$112,261
	Computers	10	Not Disclosed
Biopharmaceuticals	Biopharmaceutical products	2,496	\$113,812
	Health and beauty products	1,928	\$42,021
	Containers	56	\$24,765
Power generation and transmission	Porcelain, carbon and graphite components	435	Not Disclosed
	Turbines and turbine generators	375	Not Disclosed
	Transformers	110	\$75,273
	Electric services	60	Not Disclosed
Aerospace vehicles and defense	Aircraft	1,806	\$70,271

4.7. High-Wage Clusters, continued

Figure 4.6. Nonmetallic Mineral Mining and Quarrying Establishments Were Largely Concentrated in East Tennessee, 2011



Source: U.S. Census Bureau, County Business Patterns.

Tennessee's nonmetal mining cluster was never above \$50,000, but then in 2011 dramatically increased to \$108,749; this was 1.88 times higher than the national average nonmetal mining wage. It is unclear whether nonmetal mining wages in Tennessee will remain high or if this was some aberration, but it is something that should be paid attention to.

Aerospace Engines

The next high-wage cluster is aerospace engines which had an average wage of \$93,369. This was significantly higher than the national average wage of \$69,170 paid to aerospace engine workers. Among all clusters in Tennessee, the aerospace engines cluster was the smallest with only seven firms and a total of 140 workers. This represented a mere 0.18 percent of the nation's aerospace engines workforce. In 2011 there were 117 aerospace engine patents issued in the U.S., however only one originated from Tennessee.

Information Technology

One of the more interesting high-wage clusters in Tennessee is the Information Technology (IT) cluster. This was the largest high-wage cluster in

the region with 9,813 employees in 2011. However, this only accounted for 1.2 percent of national employment in IT. In Tennessee the average wage paid to IT workers was \$80,626. This was the fourth highest wage among all clusters in the state and third highest among Tennessee's manufacturing clusters. Nevertheless, it was still considerably lower than the national average wage paid in the IT cluster of \$97,421. Among all manufacturing clusters in the state, the IT cluster experienced the fastest job growth by a large margin. Between 1998 and 2011, 6,566 new jobs were created which represented a 202 percent job growth rate. The majority of these jobs were created between 1999 and 2003 which was in the height of the dot-com era. In more recent years there was a slight contraction of the labor force due to the recent recession. Interestingly the IT labor force was strongly affected by the recent recession but not at all during the recession in the early-2000s. In fact the industry grew in spite of the first recession of the 21st century. This of course was due to the advanced development of technology and more specifically the internet during the late-90s and early-2000s. Figure 4.7 plots employment in the IT cluster over time for both

4.7. High-Wage Clusters, continued

Tennessee and the U.S. Employment fluctuated significantly in Tennessee relative to the nation.

Within the IT cluster one of the more interesting components is the peripherals subcluster. Peripherals include any device that is connected to a computer but is not part of the computer, such as a mouse, keyboard, or printer. In 2011 there were only 594 employees in Tennessee's peripherals industry, making it one of Tennessee's smaller manufacturing industries. However, what makes the peripherals industry so interesting is the development of the 3D printer which has the potential to change the entire landscape of the manufacturing industry.

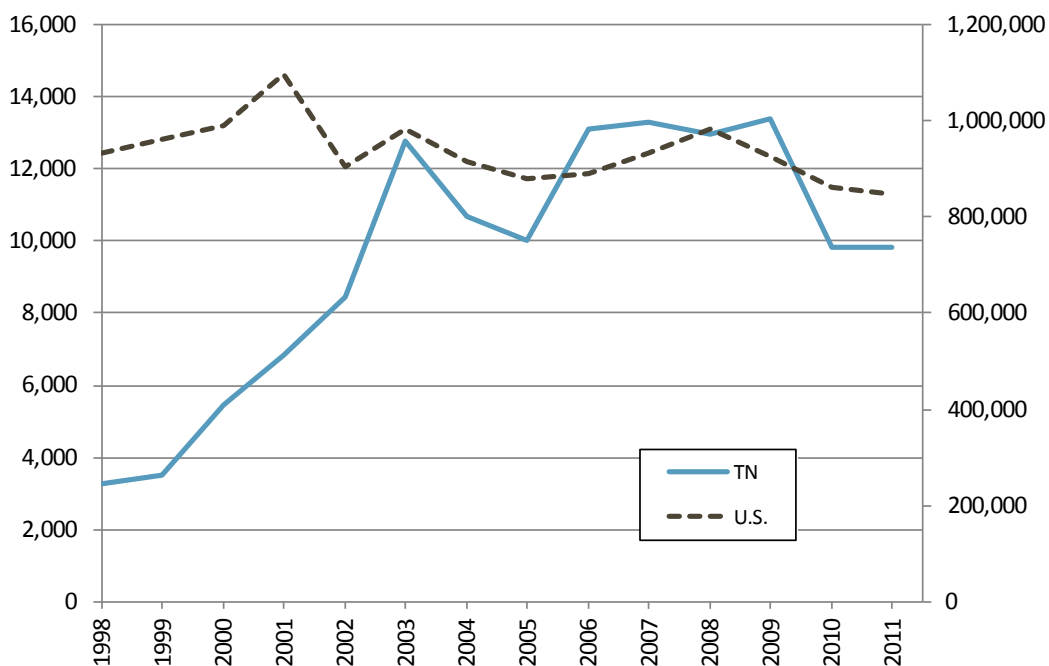
Biopharmaceuticals

The next high-wage cluster is biopharmaceuticals which had an average wage of \$76,732 in 2011. This was in line with the national average salary for biopharmaceutical workers but more than double the average salary of \$39,896 amongst all Tennessee employees in 2011. Tennessee's

biopharmaceuticals cluster had a total of 4,880 employees which accounted for nearly 2.0 percent of the nation's biopharmaceutical employment. Between 1998 and 2011, employment in U.S. biopharmaceuticals fell by 4.2 percent. This overall contraction was apparent in Tennessee's economy as job growth in the state's biopharmaceutical cluster fell by 3.6 percent. From 1998 to 2011, 265 additional biopharmaceutical establishments opened across the country, however, only nine were located in Tennessee. In total there were only 34 biopharmaceutical establishments located in Tennessee in 2011.

The biopharmaceutical cluster consisted of three subclusters. The health and beauty products subcluster which employed 1,928 workers with an average wage of \$42,021, biopharmaceutical products which employed 2,496 workers with an average wage of \$113,812, and containers which employed 56 workers at an average wage of \$24,765. Within this cluster, expansion of the biopharmaceutical products subcluster would

Figure 4.7. U.S. and Tennessee Employment in Information Technology Cluster, 1998 to 2011



Source: U.S. Cluster Mapping Project

4.7. High-Wage Clusters, continued

probably be the most beneficial due to the high wages paid in this subcluster.

Power Generation and Transmission

In Tennessee the power generation and transmission (PG&T) cluster paid an average wage of \$75,273 in 2011. This was significantly less than the national average wage of \$88,286 paid to PG&T workers. Tennessee's PG&T labor force consisted of 980 employees which accounted for only 0.46 percent of the nation's PG&T labor force. In 2011 there were 677 new patents issued to PG&T firms across the nation, but only four were to companies located in Tennessee.

Between 1998 and 2011, employment in the U.S. PG&T cluster contracted by roughly 10.4 percent. This contraction was even more pronounced in Tennessee which faced a contraction of 61.6 percent. In total there were 19 PG&T establishments located in Tennessee in 2011. This was down from 25 establishments in Tennessee in 1998.

Aerospace Vehicles and Defense

In Tennessee, the aerospace vehicles and defense cluster paid an average wage of \$70,271. This was roughly \$12,000 less than the average wage paid to aerospace vehicles and defense workers across the country.

This cluster had a total of 1,806 employees in Tennessee, which accounted for 0.85 percent of the nation's aerospace vehicles and defense labor force. Between 1998 and 2011 aerospace vehicles and defense employment fell by 25.7 percent in the U.S. This contraction was felt noticeably in Tennessee as well, where aerospace vehicles and defense employment fell by 51.0 percent. Despite this contraction in the labor force there was an increase in the number of establishments operating in Tennessee from 17 in 1998 to 22 in 2011. In 2011 there were 565 aerospace vehicles and defense patents issued in the U.S., but only three of these originated in Tennessee.

3D Printing

3D printing is done using a process known as "additive manufacturing," whereby virtually any solid object can be created from a digital model. The process starts when a computer-aided design (CAD) image is sent to the 3D printer. Special CAD software is used to "slice" the three-dimensional object into digital cross-sections which the printer can use as a blueprint. Using these cross-sections the printer then lays successive layers of material (wax, plastic, metal, or some composite material) down onto a surface and builds the model from scratch.

Traditionally, manufacturing has been done using a "subtractive process" where the manufacturer starts with a solid block or sheet of material and cuts, drills, or shaves it into the desired shape. In contrast, 3D printing relies on a more advanced "additive process" to create products from the bottom up by adding layer after layer of new material.

This process allows individuals to create objects without the need for a factory or shop filled with tools. In fact, desktop 3D printers have been developed and enable individuals to manufacture new products within the confines of their own home or office. At the same time, firms are starting to make more use of 3D printing. Aerospace engineers are using 3D printers to develop lighter, more fuel efficient airplane parts and medical device manufacturers are building customized prosthetics. For now, 3D printing is still in a niche market. It has proven useful to millions of hobbyists as well as firms looking to build customized products. While it is not yet used broadly in mass production, it has become a booming industry. According to Goldman Sachs, 3D printing is currently a \$2.2 billion market with forecasted revenue of \$10.8 billion by 2021 (Goldman Sachs, 2013). Moreover, analysts at McKinsey Global Institute estimate that 3D printing could generate an economic impact of \$230 billion to \$550 billion per year by 2025 (Manyika et al., 2013).

4.8. Well-Established Clusters

As a second strategy we identified six well-established clusters where expansion could be beneficial to the regional economy. The well-established cluster includes firms that pay a relatively high average wage and have a relatively large workforce. Total employment in the well-established clusters was 75,403 workers and the average wage was \$66,837. These clusters—nonmetal mining, biopharmaceuticals, chemical products, medical devices, metal manufacturing, and forest products—along with basic characteristics are listed in Table 4.3. The composition of each cluster (into subclusters) is then presented in Table 4.4.

Since these clusters have a larger presence in Tennessee we can also gain valuable information by looking at where these clusters are located within the state and whether any particular locational patterns emerge. Note that there are two clusters in the well-established category that were also identified in the high-wage category, nonmetal mining and biopharmaceuticals. To avoid repetition, we do not discuss the details of these two clusters any further.

Chemical Products

In 2011 the largest well-established cluster was the chemical products cluster which employed 32,668 workers in Tennessee. This accounted for nearly 10.0 percent of the nation's chemical products workforce and represented the largest share of national employment among all clusters in the state. The average wage paid to chemical product workers in Tennessee was \$60,286, which was slightly below the national average of \$66,785. Between 1998 and 2011, employment in Tennessee's chemical products cluster fell by 5.3 percent. This was far less dramatic than the 28.6 percent drop in chemical products employment that was felt across the country (see Figure 4.8.)

The chemical products cluster consisted of six subclusters and the majority of workers were employed in the intermediate chemicals and gases subcluster. This subcluster contained 9,375 workers and paid an average wage of \$80,005. Within the chemical products cluster an expansion

of the intermediate chemicals subcluster would likely be most beneficial in the near-term because it is the most established and offers the highest average wage. Examples of intermediate chemical manufacturing firms in Tennessee include the Eastman Chemical Company which is based in Kingsport and the Dupont Tate and Lyle Bio Products biochemical plant in Loudon. The highest concentration of chemical product firms, by a large margin, was located in Shelby County followed by Hamilton County (see Figure 4.9.)

Medical Devices

The medical devices cluster is another well-established cluster in Tennessee and employed 8,128 workers at an average wage of \$60,090 in 2011. This accounted for 2.1 percent of the nation's employment in medical device industries. Among medical device workers, the average Tennessean was paid slightly less than the national average wage of \$68,835. Between 1998 and 2011, national employment in the medical devices cluster expanded by 6.4 percent. In Tennessee however, job growth expanded at a far more rapid pace of 48.8 percent, making medical devices one of the fastest growing clusters in the state over the last decade. In 2011 there were 107 medical device establishments located in the state; this was up from 100 in 1998.

The medical devices cluster consisted of six subclusters, the largest of which was the surgical instruments and supplies subcluster which employed 5,854 workers and paid an average wage of \$65,341. Other medical device subclusters included ophthalmic goods, medical equipment, dental instruments and supplies, biological products, and diagnostic substances. Each of these five subclusters had employment of less than 1,000 workers and the average wage was either below \$36,000 or was not disclosed. The highest concentration of medical device firms was in Shelby County where 39 establishments were located. Most of these were likely located in close proximity to the University of Tennessee's Health Sciences Center in Memphis. In addition there was a high concentration of medical device

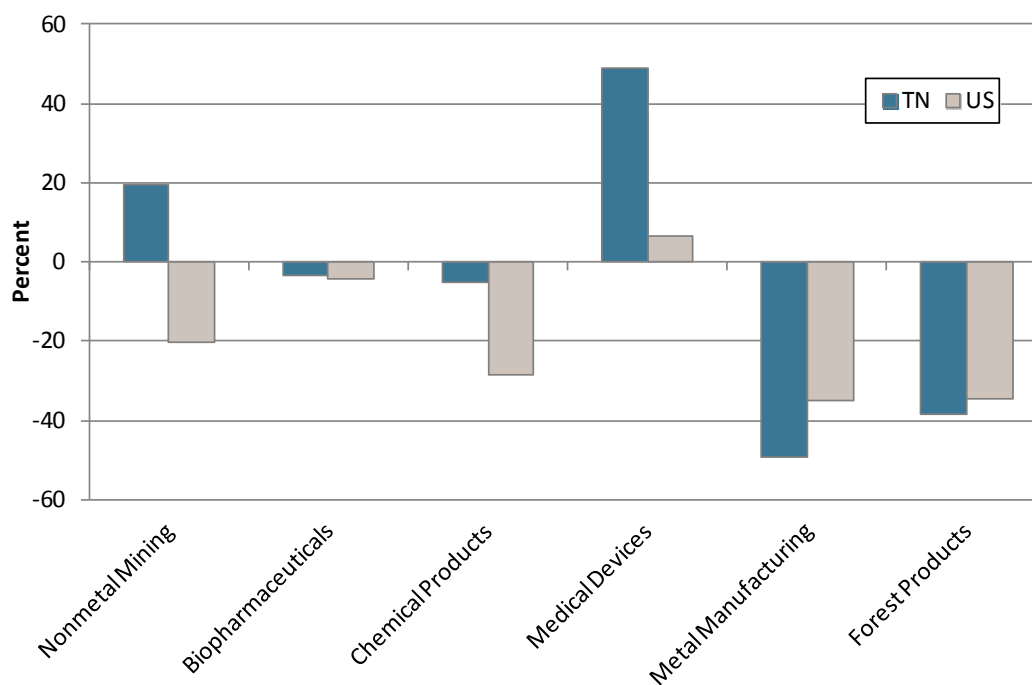
continued on page 72

4.8. Well-Established Clusters, continued

Table 4.3. Well-Established Clusters

	TN		U.S.		TN wage	Share of U.S.
	employment	TN wages	employment	U.S. wages	relative to U.S. wage	employment (percent)
Nonmetal mining	2,616	\$108,749	55,814	\$57,965	1.88	4.69
Biopharmaceuticals	4,880	\$76,732	247,797	\$73,113	1.05	1.97
Chemical products	32,668	\$60,286	340,784	\$66,785	0.9	9.59
Medical devices	8,128	\$60,090	386,589	\$68,835	0.87	2.1
Metal manufacturing	18,436	\$47,629	908,117	\$52,209	0.91	2.03
Forest products	8,675	\$47,533	281,167	\$53,827	0.88	3.09

Figure 4.8. Job Growth per Sector 1998 to 2011



Source: U.S. Cluster Mapping Project.

4.8. Well-Established Clusters, continued

Table 4.4. Well-established Clusters and Subclusters

Cluster	Subcluster	Employment	Wage
Chemical products	Intermediate chemicals and gases	19,375	\$80,005
	Ammunition	7,549	\$21,718
	Other processed chemicals	2,707	\$56,990
	Packaged chemical products	2,409	\$49,007
	Special packaging	375	Not disclosed
	Refractories	193	\$43,268
	Leather tanning and finishing	60	Not disclosed
Medical devices	Surgical instruments and supplies	5,854	\$65,341
	Ophthalmic goods	909	\$35,548
	Medical equipment	810	Not disclosed
	Dental instruments and supplies	320	\$33,747
	Biological products	175	Not disclosed
	Diagnostic substances	60	Not disclosed
Metal manufacturing	Metal processing	4,015	\$42,541
	Fabricated metal products	2,810	\$46,755
	Iron and steel mills and foundries	2,264	\$71,446
	Nonferrous mills and foundries	2,095	\$46,274
	Precision metal products	1,747	\$45,414
	Wire and springs	1,651	\$35,227
	General industrial machinery	1,194	\$52,080
	Fasteners	1,189	\$55,336
	Metal furniture	829	\$34,007
	Laundry and cleaning equipment	435	Not disclosed
	Environmental controls	147	\$47,959
	Pumps	60	Not disclosed
Forest products	Paper products	2,811	\$34,640
	Paper mills	2,621	\$73,469
	Prefabricated wood products	2,337	\$32,498
	Brooms and brushes	750	Not disclosed
	Paper industry machinery	156	\$38,372

*Note: any clusters that were identified as both *well-established* and *high-wage* clusters are listed in Table 4.2.

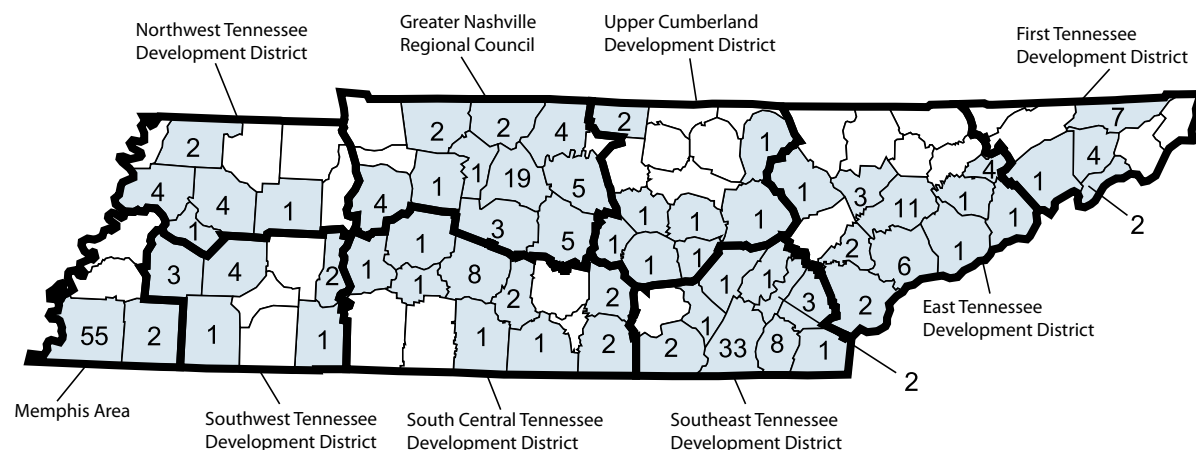
4.8. Well-Established Clusters, continued

firms located in Davidson and Williamson County (Nashville), Knox County (Knoxville), and Hamilton County (Chattanooga) (see Figure 4.10); indicating that the majority of medical device firms were located in or near the major metropolitan areas and major universities.

Metal Manufacturing

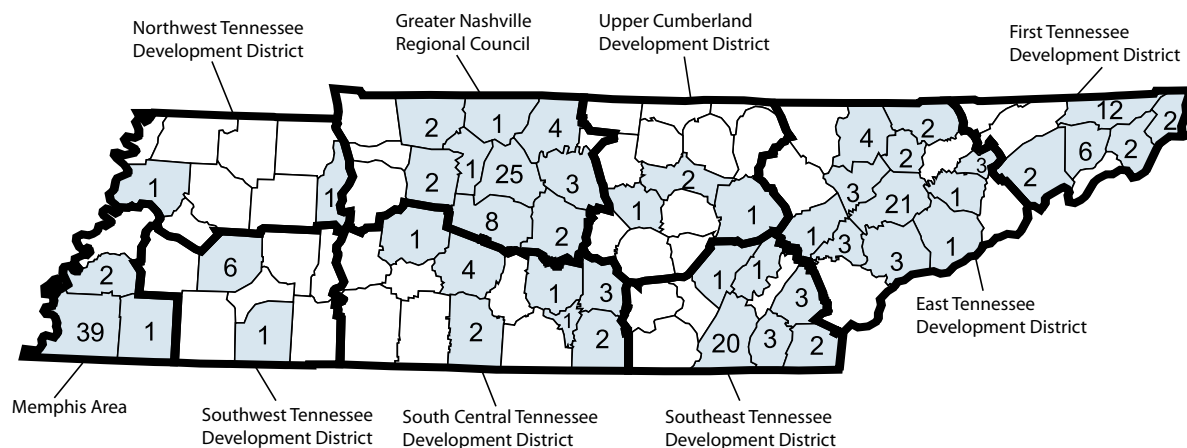
Another well-established cluster in Tennessee is metal manufacturing, which had 18,436 employees in 2011. The average wage in this cluster was \$47,629. This was slightly below the national average wage of \$52,209 paid to metal manufacturing workers, but still above Tennessee's

Figure 4.9. Chemical Manufacturing Establishments Were Concentrated Near Memphis, Chattanooga, Nashville, and Knoxville, 2011



Source: U.S. Census Bureau, County Business Patterns.

Figure 4.10. Medical Equipment and Supplies Manufacturing Establishments Were Located Near Major Metropolitan Areas, 2011



Source: U.S. Census Bureau, County Business Patterns.

4.8. Well-Established Clusters, continued

Tennessee because it was the only high paying subcluster in the group. The two other subclusters with 2,000-plus employees were the paper products subcluster and prefabricated wood products.

However, both of these subclusters had an average wage that was less than \$35,000. Unfortunately, County Business Patterns offers no county-level detail for the forest products industry.

4.9. High-Potential Clusters

As a third strategy, we identified a group of high-potential clusters, which are clusters with a high average wage but a small share of the nation's workforce. The small national workforce share indicates that larger versions of these clusters do exist in other states and hints towards an opportunity for growth. This could be accomplished by setting sights on attracting firms to relocate operations into Tennessee, by starting new firms, or by expanding existing operations within the Tennessee border. In any case, there is an existing demand for these products and the region could benefit from becoming more active in these markets. With a proper strategy and sufficient support, high-potential clusters today could become well-established clusters tomorrow.

The majority of high-potential clusters are high-tech clusters with a relatively small workforce. A new job in one of these high-tech clusters represents additional income to the region that is nearly twice as large as the region's average wage. Furthermore, employees in high-tech clusters generally possess higher levels of education

and a greater skillset. Attracting more of these workers into the region can lead to higher rates of innovation which can stimulate productivity and ultimately lead to greater prosperity for the cluster and the region.

Six clusters are identified as high-potential. Total Tennessee employment in these clusters was 8,819 workers in 2011 and the average wage was \$68,450. Each of these clusters had less than a one percent share of the cluster's national employment and the average share was 0.45 percent. There was some overlap between the high-wage clusters and high-potential clusters. Specifically, aerospace engines, aerospace vehicles and defense, and power generation and transmission were identified in both categories. However, three new clusters: analytical instruments, communications equipment, and oil and gas products and services also emerged. Basic characteristics of all six high-potential clusters are presented in Table 4.5 and a more detailed breakdown of the composition of the three new clusters is presented in Table 4.6.

Table 4.5. High-Potential Clusters

	TN employment	TN wages	U.S. employment	U.S. wages	TN wage relative to U.S. wage	Share of U.S. employment (percent)	TN patents	Share of U.S. patents (percent)
Aerospace engines	140	\$93,369	79,667	\$69,170	1.35	0.18	1	0.85
Power generation and transmission	980	\$75,273	212,419	\$88,286	0.85	0.46	4	0.59
Aerospace vehicles and defense	1,806	\$70,271	327,453	\$82,676	0.85	0.55	3	0.53
Oil and gas products and services	1,270	\$65,755	602,274	\$91,873	0.72	0.21	2	0.52
Analytical instruments	3,485	\$55,433	487,168	\$74,199	0.75	0.72	69	1.05
Communications equipment	1,138	\$50,599	186,659	\$74,846	0.68	0.61	42	0.32

4.9. High-Potential Clusters, continued

Table 4.6. High-Potential Clusters and Subclusters

Cluster	Subclusters	Employment	Wage
Oil and gas products and services	Pipeline transportation	445	Not disclosed
	Petroleum processing	435	Not disclosed
	Oil and gas exploration drilling	256	\$63,776
	Hydrocarbons	124	\$69,158
	Oil and gas machinery	10	Not disclosed
Analytical instruments	Electronic components	1,508	\$51,053
	Process instruments	1,399	\$60,225
	Laboratory instruments	494	\$58,336
	Search and navigation equipment	74	\$71,135
	Optical instruments	10	Not disclosed
Communications equipment	Electrical and electronic components	778	\$50,599
	Communications equipment	185	Not disclosed
	Specialty office machines	175	Not disclosed

*Note: any clusters that were identified as both high-potential and high-wage clusters are listed in Table 4.2.

4.10. Aspirational Clusters

Finally, we identified a group of low-wage clusters which are labeled as aspirational. These clusters all had an average wage that was lower than the state average of \$39,896. However, not all of these aspirational clusters represented traditionally low paying jobs; in many cases the national average wage was significantly higher than the wage paid in Tennessee.

Thirteen aspirational clusters were identified in the state. In total there were 172,107 employees working in these aspirational clusters, and the average wage was \$32,220. Basic characteristics of the aspirational clusters are presented in Table 4.7 and a more detailed breakdown on the composition of each cluster is presented in Table 4.8.

Among all four identification strategies, the largest number of clusters was identified into this aspirational category. Furthermore, some of the largest clusters, as measured by labor force size,

were also identified as aspirational. This illustrates that a large portion of the Tennessee workforce was employed in lower paying occupations. As noted above, the aspirational cluster does not capture advanced manufacturing. But these same firms could conceivably benefit significantly from advanced manufacturing practices. Identifying and expanding these aspirational clusters could be a successful strategy for long-term sustainable growth in the region simply due to the large number of workers that could stand to benefit. For example, one of the larger clusters in the aspirational group was the motor driven products cluster (e.g. refrigerators, heaters, and other motorized machinery), which had a labor force of over 20,000 workers. This accounted for 8.6 percent of the nation's labor force in motor driven products. In Tennessee the average wage paid to these workers was almost \$10,000 lower than the national average paid to motor driven

4.10. Aspirational Clusters, continued

Table 4.7. Aspirational Clusters

	TN employment	TN wages	U.S. employment	U.S. wages	TN wage relative to U.S. wage	Share of U.S. employment (percent)	TN patents	Share of U.S. patents (percent)
Motor driven products	20,066	\$39,001	234,141	\$48,852	0.8	8.57	23	1.5
Sporting, recreational and children's goods	578	\$36,134	55,385	\$45,507	0.79	1.04	3	0.82
Prefabricated enclosures	6,283	\$35,517	141,951	\$42,813	0.83	4.43	3	0.89
Leather and related products	1,679	\$34,785	86,245	\$43,680	0.8	1.95	4	1.14
Construction materials	4,799	\$33,433	143,842	\$37,983	0.88	3.34	7	1
Local household goods and services	33,005	\$30,961	1,742,828	\$33,032	0.94	1.89	1	1.56
Furniture	6,172	\$29,049	166,336	\$32,627	0.89	3.71	3	1.69
Livestock processing	6,513	\$27,594	222,666	\$27,106	1.02	2.92	1	2.22
Forestry and primary wood processing	1,172	\$27,165	85,920	\$41,827	0.65	1.36	0	0
Local food and beverage processing and distribution	73,684	\$25,832	4,028,492	\$28,405	0.91	1.83	1	0.84
Apparel	3,789	\$23,511	120,251	\$26,980	0.87	3.15	2	1.04

product workers. Narrowing this wage gap could have a large positive effect on living standards in Tennessee. Specifically, an incremental increase in the wages of a large group could produce wealth effects that have a profound impact on the

region's economy. While identifying some of these aspirational clusters is straightforward, determining ways to increase firm profitability, competitiveness, and earnings is challenging.

4.11. Conclusion

Cluster-based approaches to regional economic development have become commonplace in recognition of agglomeration spillovers and supply-chain linkages across firms and industries. An important implication of this approach is that improvements in the competitiveness of one firm can yield important benefits for other firms and the region within which the cluster is located.

Advanced manufacturing is an emerging component of the industrial sector and in principle lends itself to examination through the lens of regional clusters. However, advanced manufacturing is in practice difficult to define and identify with available data. This report uses a process-oriented definition of advanced manufacturing that allows industry identification indirectly through metrics such as worker earnings and patent activity. Worker earnings are generally associated with higher levels of formal education

and on-the-job training and greater capital investment of firms, and thus have an important bearing on productivity and firm competitiveness. Patenting is illustrative of research and knowledge development that also enhances production processes and productivity.

Using the cluster approach, four different candidate sets of clusters are identified that may offer promise through policy support and technical assistance. The most promising from an advanced manufacturing perspective is the *high-wage cluster* where firms and industries are isolated based on their earnings relative to the statewide average. Also identified is a *well-established cluster* that accounts for a large share of state employment and relatively high earnings, a *high-potential cluster* where earnings are high but the state's share of national employment is small, and an *aspirational cluster* of industries and firms that

4.10. Aspirational Clusters, continued

Table 4.8. Aspirational Clusters and Subclusters

Cluster	Subcluster	Employment	Wage
Motor driven products	Refrigeration and heating equipment	6,689	\$42,708
	Appliances	6,325	\$33,593
	Tires	3,750	Not disclosed
	Motorized equipment	1,972	\$42,231
	Motors and generators	720	\$31,765
	Batteries	375	Not disclosed
	Specialized pumps	175	Not disclosed
	Specialized machinery	60	Not disclosed
Jewelry and precious metals	Jewelry and precious metals products	347	\$38,711
	Cutlery	175	Not disclosed
	Costume jewelry	60	Not disclosed
	Collectibles	10	Not disclosed
Building fixtures, equipment and services	Wood cabinets, fixtures and other products	4,239	\$32,082
	Furniture and fittings	2,876	\$35,401
	Plumbing products	2,809	\$35,574
	Fabricated materials	1,742	\$49,897
	Heating and lighting	752	\$42,020
	Concrete, gypsum and other building products	747	\$41,143
	Steam and air conditioning	375	Not disclosed
	Clay and vitreous products	175	Not disclosed
	Drapery hardware	60	Not disclosed
Sporting, recreational and children's goods	Sporting and athletic goods	369	\$35,482
	Motorcycles and bicycles	199	\$37,342
	Games, toys, and children's vehicles	10	Not disclosed
Prefabricated enclosures	Aluminum processing	1,750	Not disclosed
	Mobile homes	1,750	Not disclosed
	Caskets	750	Not disclosed
	Elevators and moving stairways	750	Not disclosed
	Recreational vehicles and parts	583	\$27,775
	Trucks and trailers	350	\$44,543
	Household refrigerators and freezers	175	Not disclosed
	Office furniture	175	Not disclosed
Leather and related products	Related products	787	\$33,478
	Leather products	472	\$25,498
	Coated fabrics	360	\$43,497
	Accessories	60	Not disclosed
Construction materials	Wood products	1,976	\$25,956
	Rubber products	1,316	\$45,340
	Tile, brick and glass	925	Not disclosed
	Cut and crushed	572	\$31,705
	Plumbing fixtures	10	Not disclosed

4.11. Conclusion, continued

pays relatively low wages but could nonetheless benefit from productivity-enhancing improvements to production processes. The identification of clusters and their associated characteristics should help policymakers and providers of technical assistance better target their scarce resources that are intended to promote economic development in Tennessee. Future questions for consideration include: Which clusters are more likely to invest in technical assistance from university and state

service providers? Are there relationships between cluster and ownership structure, interest in technology transfer and growth, defined supply chains, etc.? What services for each sector are more conducive to manufacturing employment? This study provides a foundation for continuing efforts to understand how policy makers and service providers can better serve Tennessee's manufacturers.

4.12. Appendix

Table A.4.1. Clusters excluded from sample

Nonmanufacturing
Business services
Distribution services
Education and knowledge creation
Entertainment
Financial services
Hospitality and tourism
Local commercial services
Local community and civic organizations
Local education and training
Local entertainment and media
Local financial services
Local health services
Local hospitality establishments
Local industrial products and services
Local logistical services
Local motor vehicle products and services
Local personal services (non-medical)
Local retail clothing
Local utilities
Publishing and printing
Transportation and logistics
Missing Data
Agricultural products (resource dependent)
Coal mining
Combination energy services
Fertilizers
Fishing and fishing products
Footwear
Metal mining
Tobacco
Water transport

Table A.4.2. Manufacturing Clusters in Tennessee

Aerospace engines
Aerospace vehicles and defense
Agricultural products
Analytical instruments
Apparel
Automotive
Biopharmaceuticals
Building fixtures, equipment and services
Chemical products
Communications equipment
Construction materials
Forest products
Forestry and primary wood processing
Furniture
Heavy construction services
Heavy machinery
Information technology
Jewelry and precious metals
Leather and related products
Lighting and electrical equipment
Livestock processing
Local food and beverage processing and distribution
Local household goods and services
Local real estate, construction, and development
Medical devices
Metal manufacturing
Motor driven products
Nonmetal mining
Oil and gas products and services
Plastics
Power generation and transmission
Prefabricated enclosures
Processed food
Production technology
Sporting, recreational and children's goods
Textiles

4.13. References

- Andersson, T., Hansson, E., Schwaag Serger, S., and Sorvik, J. (2004). *The Cluster Policies Whitebook*. Sweden: International Organization for Knowledge Economy and Enterprise Development.
- Delgado, M., Porter, M., and Stern, S. (2010). Clusters and Entrepreneurship. *Journal of Economic Geography*, 1-24.
- Goldman Sachs. (2013). *The Search for Creative Destruction: Goldman Sachs Global Investment Research*.
- Ketels, C. H. (2003). *The Development of The Cluster Concept – Present Experiences and Further Developments*. Paper presented at the NRW Conference on Clusters, Duisburg, Germany.
- Manyika, J., Chui, M., Bughin, J., Dobbs, R., Bisson, P., and Marrs, A. (2013). *Disruptive Technologies: Advances That Will Transform Life, Business, and the Global Economy: McKinsey Global Institute*.
- Porter, M. (1998). *On Competition*. Cambridge, MA: Harvard Business School Press.
- Porter, M. (2000). Location, Competition, and Economic Development: Local Clusters in A Global Economy. *Economic development quarterly*, 14(1), 15-34.
- Porter, M. (2001). *Clusters of Innovation: Regional Foundations of U.S. Competitiveness*. Council on Competitiveness.
- Porter, M. (2003). The Economic Performance of Regions. *Regional Studies*, 37(6-7), 545-546. doi: 10.1080/0034340032000108688
- Porter, M. (2013). Porter Base Cluster Definitions. Retrieved September 20, 2013, from <http://clustermapping.us/index.html#!view=aboutobservatory;url=/about-observatory/about-U.S.-cluster-mapping/contact-us/>
- Waldman, C., and Murray, M. N. (2013). *Advanced Manufacturing in the American South: An Economic Analysis Supporting Regional Development*. In S. G. s. Association (Ed.): *Manufacturers Alliance for Productivity and Innovation*.

APPENDIX A: FORECAST DATA

In this section—

Appendix A: Forecast Data

Quarterly	pages 2–25 (2013:4 to 2016:1)
Annual	pages 26–40 (2013 to 2023)

Quarterly Forecast Tables

Table 1:	Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted	2
Table 2:	Selected Per Capita U.S. and Tennessee Economic Indicators, Seasonally Adjusted	4
Table 3:	Tennessee Personal Income Components, Seasonally Adjusted (millions of 2009 dollars)	5
Table 4:	Tennessee Personal Income Components, Seasonally Adjusted (millions of current dollars)	6
Table 5:	Tennessee Nonfarm Employment by Sector, Not Seasonally Adjusted (thousands of jobs)	7
Table 6:	Tennessee Durable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)	8
Table 7:	Tennessee Nondurable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)	9
Table 8:	Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)	10
Table 9:	Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)	12
Table 10:	Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)	13
Table 11:	Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (2009 dollars)	14
Table 12:	Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)	15
Table 13:	Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (current dollars)	17
Table 14:	Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)	18
Table 15:	Tennessee Civilian Labor Force and Unemployment Rate, Not Seasonally Adjusted	20
Table 16:	Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted	21
Table 17:	Tennessee Taxable Sales, Not Seasonally Adjusted (millions of 2009 dollars)	22
Table 18:	Tennessee Taxable Sales, Seasonally Adjusted (millions of 2009 dollars)	23
Table 19:	Tennessee Taxable Sales, Not Seasonally Adjusted (millions of current dollars)	24
Table 20:	Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)	25

Annual Forecast Tables

Table 1:	Selected U.S. and Tennessee Economic Indicators	26
Table 2:	Selected Per Capita U.S. and Tennessee Economic Indicators	27
Table 3:	Tennessee Personal Income Components (millions of 2009 dollars)	28
Table 4:	Tennessee Personal Income Components (millions of current dollars)	29
Table 5:	Tennessee Nonfarm Employment by Sector (thousands of jobs)	30
Table 6:	Tennessee Durable Goods Manufacturing Employment (thousands of jobs)	31
Table 7:	Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs)	32
Table 8:	Tennessee Average Annual Wage and Salary Rate by Sector (2009 dollars)	33
Table 9:	Tennessee Average Annual Wage and Salary Rate by Sector (current dollars)	34
Table 10:	Tennessee Civilian Labor Force and Unemployment Rate	35
Table 11:	Tennessee Taxable Sales (millions of 2009 dollars)	36
Table 12:	Tennessee Taxable Sales (millions of current dollars)	37
Table 13:	Tennessee Gross Domestic Product by Sector (millions of 2005 dollars)	38
Table 14:	Tennessee Durable Goods Manufacturing Gross Domestic Product (millions of 2005 dollars)	39
Table 15:	Tennessee Nondurable Goods Manufacturing Gross Domestic Product (millions of 2005 dollars)	40

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
US GDP (Bil2009\$) SAAR.....	15679.7	15839.3	15942.3	16022.4	16120.5	16228.2	16360.4	16495.2	16635.5	16781.4	16921.9	17055.7	15470.7	15761.3	16182.8	16708.5
% Chg Prev Qtr SAAR.....	2.48	4.13	2.63	2.02	2.47	2.70	3.30	3.34	3.45	3.55	3.39	3.20	2.78	1.88	2.67	3.25
% Chg Same Qtr Last Yr.....	1.63	1.97	2.59	2.81	2.81	2.45	2.62	2.95	3.20	3.41	3.43	3.40	2.78	1.88	2.67	3.25
US GDP (Bil\$) SAAR.....	16661.0	16912.9	17060.0	17213.8	17408.6	17599.7	17809.5	18036.5	18258.5	18490.3	18716.4	18959.7	16244.6	16792.3	17507.9	18375.4
% Chg Prev Qtr SAAR.....	3.08	6.19	3.52	3.66	4.60	4.46	4.85	5.20	5.01	5.18	4.98	5.30	4.58	3.37	4.26	4.96
% Chg Same Qtr Last Yr.....	3.10	3.40	3.90	4.10	4.49	4.06	4.39	4.78	4.88	5.06	5.09	5.12	4.58	3.37	4.26	4.96
TN PERSONAL INCOME (MIL2009\$) SAAR....	239467	240081	242035	243734	245548	247361	249213	250821	252668	254347	256024	257359	236000	239587	246464	253465
% Chg Prev Qtr SAAR.....	4.64	1.03	3.30	2.84	3.01	2.99	3.03	2.61	2.98	2.68	2.66	2.10	3.38	1.52	2.87	2.84
% Chg Same Qtr Last Yr.....	1.67	2.26	1.07	2.94	2.54	3.03	2.97	2.91	2.90	2.82	2.73	2.61	3.38	1.52	2.87	2.84
US PERSONAL INCOME (BIL2009\$) SAAR....	13180	13248	13308	13470	13576	13699	13813	13962	14073	14177	14286	14448	12964	13190	13640	14125
% Chg Prev Qtr SAAR.....	4.81	2.08	1.84	4.96	3.19	3.67	3.37	4.38	3.20	2.99	3.12	4.60	2.30	1.74	3.41	3.55
% Chg Same Qtr Last Yr.....	2.09	2.67	0.83	3.41	3.01	3.41	3.80	3.65	3.66	3.48	3.42	3.48	2.30	1.74	3.41	3.55
TN PERSONAL INCOME (MIL\$) SAAR.....	255937	257825	260369	263071	266126	269105	272078	274929	278030	281073	284138	287019	250189	256814	267595	279543
% Chg Prev Qtr SAAR.....	4.52	2.98	4.01	4.22	4.73	4.55	4.49	4.26	4.59	4.45	4.43	4.12	5.29	2.65	4.20	4.46
% Chg Same Qtr Last Yr.....	2.76	3.41	1.98	3.93	3.98	4.37	4.50	4.51	4.47	4.45	4.43	4.40	5.29	2.65	4.20	4.46
US PERSONAL INCOME (BIL\$) SAAR.....	14086	14226	14314	14521	14695	14877	15049	15266	15438	15611	15794	16045	13744	14138	14786	15527
% Chg Prev Qtr SAAR.....	4.68	4.04	2.50	5.91	4.86	5.06	4.71	5.89	4.57	4.58	4.77	6.50	4.19	2.87	4.58	5.02
% Chg Same Qtr Last Yr.....	3.18	3.83	1.71	4.28	4.32	4.58	5.13	5.13	5.05	4.94	4.95	5.10	4.19	2.87	4.58	5.02
TN NONFARM JOBS (THOUS).....	2758.3	2749.0	2762.2	2775.4	2788.6	2801.5	2815.3	2828.2	2840.4	2852.3	2864.7	2876.1	2715.0	2755.3	2795.2	2846.4
% Chg Prev Qtr SAAR.....	0.97	-1.34	1.92	1.93	1.92	1.86	1.99	1.84	1.74	1.69	1.75	1.60	2.03	1.49	1.45	1.83
% Chg Same Qtr Last Yr.....	1.67	1.21	1.12	0.86	1.10	1.91	1.92	1.90	1.86	1.82	1.76	1.70	2.03	1.49	1.45	1.83
US NONFARM JOBS (MIL).....	135.7	136.2	136.8	137.3	137.9	138.6	139.2	139.9	140.6	141.3	142.1	142.8	133.7	135.9	138.3	141.0
% Chg Prev Qtr SAAR.....	1.73	1.42	1.78	1.64	1.59	2.12	1.91	2.03	2.01	2.01	2.15	1.93	1.70	1.64	1.71	1.99
% Chg Same Qtr Last Yr.....	1.63	1.68	1.71	1.64	1.61	1.78	1.81	1.91	2.02	1.99	2.05	2.03	1.70	1.64	1.71	1.99
TN MFG JOBS (THOUS).....	319.7	321.3	321.9	322.6	323.3	323.9	324.4	324.7	325.1	325.3	325.5	325.8	313.5	320.3	323.6	325.1
% Chg Prev Qtr SAAR.....	1.52	2.11	0.66	0.95	0.88	0.75	0.61	0.37	0.38	0.29	0.20	0.37	2.97	2.19	1.02	0.48
% Chg Same Qtr Last Yr.....	1.99	2.03	1.79	1.31	1.15	0.81	0.80	0.65	0.53	0.41	0.31	0.31	2.97	2.19	1.02	0.48
US MFG JOBS (MIL).....	12.0	12.0	12.0	12.1	12.3	12.4	12.4	12.5	12.5	12.6	12.7	12.7	11.9	12.0	12.3	12.6
% Chg Prev Qtr SAAR.....	-0.26	-0.36	1.76	2.45	5.75	4.65	0.57	2.28	1.56	1.79	2.05	1.53	1.65	0.51	2.56	2.25
% Chg Same Qtr Last Yr.....	0.37	0.16	0.61	0.89	2.38	3.64	3.34	3.29	2.25	1.55	1.92	1.73	1.65	0.51	2.56	2.25
TN UNEMPLOYMENT RATE (%).....	8.3	8.5	8.3	8.0	7.6	7.3	7.2	7.2	7.0	6.9	6.8	6.7	8.0	8.2	7.5	7.0
US UNEMPLOYMENT RATE (%).....	7.6	7.3	7.1	6.8	6.6	6.4	6.2	6.1	5.9	5.8	5.7	5.6	8.1	7.4	6.5	5.9

(CONTINUED ON NEXT PAGE)

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
CHAINED PRICE INDEX, GDP																
(2009=100.0).....	106.2	106.7	107.0	107.4	108.0	108.5	108.9	109.3	109.8	110.2	110.6	111.2	105.0	106.5	108.2	110.0
% Chg Prev Qtr SAAR.....	0.65	1.97	1.23	1.60	2.08	1.72	1.51	1.80	1.51	1.57	1.54	2.03	1.75	1.39	1.62	1.65
% Chg Same Qtr Last Yr.....	1.35	1.27	1.30	1.36	1.72	1.66	1.73	1.78	1.63	1.60	1.61	1.66	1.75	1.39	1.62	1.65
US PERS CONSUMP DEFL (2009=100.0).....	106.9	107.4	107.6	107.8	108.2	108.6	108.9	109.3	109.7	110.1	110.6	111.1	106.0	107.2	108.4	109.9
% Chg Prev Qtr SAAR.....	-0.12	1.92	0.65	0.90	1.63	1.33	1.30	1.44	1.33	1.55	1.59	1.82	1.85	1.11	1.13	1.41
% Chg Same Qtr Last Yr.....	1.07	1.12	0.88	0.83	1.27	1.13	1.29	1.42	1.35	1.40	1.48	1.57	1.85	1.11	1.13	1.41
CONSUMER PRICE INDEX,																
ALL-URBAN (82-84=1.000).....	2.321	2.336	2.341	2.346	2.359	2.369	2.379	2.389	2.399	2.410	2.420	2.433	2.296	2.330	2.363	2.404
% Chg Prev Qtr SAAR.....	-0.03	2.63	0.83	0.91	2.15	1.74	1.72	1.77	1.59	1.80	1.79	2.10	2.08	1.46	1.44	1.75
% Chg Same Qtr Last Yr.....	1.42	1.55	1.21	1.08	1.63	1.41	1.63	1.84	1.70	1.72	1.74	1.82	2.08	1.46	1.44	1.75
BANK PRIME INTEREST RATE (%).....	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.9	4.4	3.3	3.3	3.3	3.4
FEDERAL FUNDS RATE (% per annum).....	0.117	0.083	0.086	0.090	0.090	0.090	0.090	0.093	0.140	0.286	0.892	1.357	0.140	0.107	0.090	0.353
30-YEAR FIXED MORTGAGE RATE (%).....	3.7	4.4	4.3	4.5	4.6	4.7	4.8	4.8	4.9	5.0	5.2	5.5	3.7	4.0	4.6	5.0
TN TAXABLE SALES (MIL2009\$).....	23504	23453	23640	23790	23909	24055	24204	24321	24438	24571	24707	24801	92504	93995	95958	98038
% Chg Prev Qtr SAAR.....	1.81	-0.86	3.23	2.57	2.00	2.48	2.49	1.95	1.94	2.19	2.23	1.53	2.82	1.61	2.09	2.17
% Chg Same Qtr Last Yr.....	2.29	2.53	2.20	1.68	1.72	2.57	2.39	2.23	2.22	2.14	2.08	1.97	2.82	1.61	2.09	2.17
TN TAXABLE SALES (MIL\$).....	25120	25186	25431	25678	25912	26170	26425	26659	26892	27153	27420	27659	98060	100752	104185	108123
% Chg Prev Qtr SAAR.....	1.69	1.06	3.94	3.94	3.70	4.04	3.95	3.59	3.54	3.94	4.00	3.53	4.71	2.75	3.41	3.78
% Chg Same Qtr Last Yr.....	3.38	3.69	3.12	2.65	3.15	3.90	3.91	3.82	3.78	3.76	3.77	3.75	4.71	2.75	3.41	3.78
TN AVG ANNUAL WAGE, NONFARM																
(2009\$).....	42110	42217	42389	42498	42596	42709	42827	42936	43040	43122	43196	43244	42024	42146	42657	43074
% Chg Prev Qtr SAAR.....	2.34	1.02	1.64	1.03	0.92	1.07	1.11	1.02	0.98	0.77	0.69	0.44	1.56	0.29	1.21	0.98
% Chg Same Qtr Last Yr.....	0.26	1.38	-0.07	1.51	1.15	1.16	1.03	1.03	1.04	0.97	0.86	0.72	1.56	0.29	1.21	0.98
TN AVG ANNUAL WAGE, NONFARM (\$)......	45007	45338	45600	45870	46165	46463	46756	47063	47361	47654	47940	48228	44549	45176	46313	47504
% Chg Prev Qtr SAAR.....	2.23	2.97	2.34	2.39	2.60	2.60	2.55	2.65	2.56	2.50	2.42	2.43	3.44	1.41	2.52	2.57
% Chg Same Qtr Last Yr.....	1.33	2.52	0.82	2.48	2.57	2.48	2.54	2.60	2.59	2.56	2.53	2.48	3.44	1.41	2.52	2.57

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators, Seasonally Adjusted

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
US GDP (2009\$) SAAR.....	49509	49917	50145	50300	50510	50749	51064	51386	51723	52076	52411	52724	49179	49719	50656	51900
% Chg Prev Qtr SAAR.....	1.69	3.33	1.84	1.24	1.68	1.91	2.51	2.54	2.65	2.76	2.60	2.41	2.04	1.10	1.89	2.46
% Chg Same Qtr Last Yr.....	0.85	1.18	1.80	2.02	2.02	1.67	1.83	2.16	2.40	2.61	2.64	2.60	2.04	1.10	1.89	2.46
US GDP (\$) SAAR.....	52608	53300	53660	54040	54546	55038	55587	56187	56769	57379	57969	58610	51639	52971	54804	57078
% Chg Prev Qtr SAAR.....	2.28	5.37	2.73	2.86	3.80	3.66	4.05	4.39	4.21	4.37	4.18	4.49	3.83	2.58	3.46	4.15
% Chg Same Qtr Last Yr.....	2.31	2.61	3.10	3.30	3.68	3.26	3.59	3.97	4.08	4.25	4.29	4.31	3.83	2.58	3.46	4.15
TN PERSONAL INCOME (2009\$) SAAR....	36737	36734	36935	37097	37275	37451	37633	37777	37956	38109	38261	38362	36543	36706	37364	38026
% Chg Prev Qtr SAAR.....	3.54	-0.03	2.21	1.76	1.93	1.91	1.96	1.54	1.91	1.62	1.60	1.06	2.28	0.45	1.79	1.77
% Chg Same Qtr Last Yr.....	0.60	1.18	0.01	1.86	1.46	1.95	1.89	1.83	1.83	1.76	1.67	1.55	2.28	0.45	1.79	1.77
US PERSONAL INCOME (2009\$) SAAR....	41615	41749	41860	42288	42539	42841	43115	43496	43755	43994	44248	44662	41211	41609	42696	43874
% Chg Prev Qtr SAAR.....	4.00	1.29	1.06	4.16	2.39	2.88	2.57	3.58	2.41	2.20	2.33	3.79	1.56	0.97	2.61	2.76
% Chg Same Qtr Last Yr.....	1.31	1.89	0.05	2.62	2.22	2.62	3.00	2.86	2.86	2.69	2.63	2.68	1.56	0.97	2.61	2.76
TN PERSONAL INCOME (\$) SAAR.....	39264	39449	39733	40040	40398	40743	41086	41408	41766	42113	42463	42783	38739	39345	40567	41938
% Chg Prev Qtr SAAR.....	3.42	1.90	2.91	3.12	3.63	3.46	3.40	3.17	3.50	3.37	3.36	3.05	4.17	1.56	3.10	3.38
% Chg Same Qtr Last Yr.....	1.67	2.32	0.90	2.84	2.89	3.28	3.40	3.42	3.39	3.36	3.35	3.32	4.17	1.56	3.10	3.38
US PERSONAL INCOME (\$) SAAR.....	44478	44833	45024	45587	46043	46524	46972	47557	47998	48446	48919	49600	43689	44599	46283	48231
% Chg Prev Qtr SAAR.....	3.88	3.24	1.72	5.09	4.06	4.25	3.90	5.07	3.77	3.78	3.96	5.68	3.44	2.08	3.78	4.21
% Chg Same Qtr Last Yr.....	2.39	3.03	0.93	3.47	3.52	3.77	4.33	4.32	4.25	4.13	4.15	4.30	3.44	2.08	3.78	4.21
TN TAXABLE SALES (2009\$).....	3606	3588	3608	3621	3629	3642	3655	3663	3671	3681	3692	3697	14324	14401	14547	14708
% Chg Prev Qtr SAAR.....	0.74	-1.90	2.14	1.49	0.93	1.41	1.43	0.89	0.88	1.13	1.18	0.49	1.73	0.54	1.02	1.10
% Chg Same Qtr Last Yr.....	1.21	1.45	1.13	0.61	0.66	1.49	1.31	1.16	1.15	1.08	1.02	0.92	1.73	0.54	1.02	1.10
TN TAXABLE SALES (\$).....	3854	3854	3881	3908	3934	3962	3990	4015	4040	4068	4098	4123	15184	15436	15794	16221
% Chg Prev Qtr SAAR.....	0.62	0.00	2.85	2.85	2.61	2.95	2.87	2.52	2.46	2.87	2.92	2.47	3.60	1.66	2.32	2.70
% Chg Same Qtr Last Yr.....	2.29	2.59	2.03	1.57	2.07	2.82	2.82	2.74	2.70	2.68	2.69	2.68	3.60	1.66	2.32	2.70

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 3: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of 2009 dollars)

January 2014

	History		Forecast Data											Annual			
	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TN PERSONAL INCOME.....	236765	239467	240081	242035	243734	245548	247361	249213	250821	252668	254347	256024	257359	236000	239587	246464	253465
% Chg Prev Qtr SAAR.....	-4.43	4.64	1.03	3.30	2.84	3.01	2.99	3.03	2.61	2.98	2.68	2.66	2.10	3.38	1.52	2.87	2.84
% Chg Same Qtr Last Yr.....	1.08	1.67	2.26	1.07	2.94	2.54	3.03	2.97	2.91	2.90	2.82	2.73	2.61	3.38	1.52	2.87	2.84
WAGES AND SALARIES.....	116051	117009	116909	117934	118795	119628	120490	121410	122266	123085	123829	124570	125197	114946	116976	120080	123438
% Chg Prev Qtr SAAR.....	-2.28	3.34	-0.34	3.56	2.95	2.83	2.91	3.09	2.85	2.71	2.44	2.42	2.03	3.56	1.77	2.65	2.80
% Chg Same Qtr Last Yr.....	1.53	1.92	2.59	1.04	2.36	2.24	3.06	2.95	2.92	2.89	2.77	2.60	2.40	3.56	1.77	2.65	2.80
OTHER LABOR INCOME.....	27853	28016	28027	28111	28212	28290	28413	28544	28636	28756	28895	29061	29230	27466	28002	28365	28837
% Chg Prev Qtr SAAR.....	1.65	2.36	0.16	1.21	1.44	1.12	1.75	1.85	1.29	1.69	1.95	2.32	2.34	5.04	1.95	1.30	1.66
% Chg Same Qtr Last Yr.....	2.53	1.95	1.99	1.34	1.29	0.98	1.38	1.54	1.50	1.65	1.69	1.81	2.07	5.04	1.95	1.30	1.66
PROPRIETORS INCOME.....	30753	30961	31148	31405	31738	32087	32450	32809	33168	33527	33872	34220	34517	29765	31067	32271	33697
% Chg Prev Qtr SAAR.....	8.13	2.73	2.44	3.34	4.31	4.46	4.61	4.50	4.45	4.40	4.18	4.17	3.52	6.22	4.37	3.88	4.42
% Chg Same Qtr Last Yr.....	3.48	4.51	5.38	4.14	3.20	3.64	4.18	4.47	4.51	4.49	4.38	4.30	4.07	6.22	4.37	3.88	4.42
RENT, INTEREST, DIVIDENDS.....	32861	33686	33935	34328	34653	34916	35236	35542	35822	36178	36517	36805	37096	32740	33702	35087	36331
% Chg Prev Qtr SAAR.....	-11.12	10.43	2.99	4.71	3.84	3.08	3.72	3.52	3.18	4.04	3.81	3.19	3.19	3.51	2.94	4.11	3.54
% Chg Same Qtr Last Yr.....	2.46	3.50	4.41	1.43	5.45	3.65	3.83	3.54	3.37	3.61	3.64	3.55	3.56	3.51	2.94	4.11	3.54
TRANSFER PAYMENTS.....	49318	50015	50297	50604	50871	51201	51388	51567	51806	52019	52142	52301	52445	48786	50059	51257	52067
% Chg Prev Qtr SAAR.....	2.97	5.77	2.27	2.46	2.13	2.62	1.46	1.41	1.86	1.66	0.95	1.22	1.11	0.37	2.61	2.39	1.58
% Chg Same Qtr Last Yr.....	1.42	2.54	3.11	3.36	3.15	2.37	2.17	1.90	1.84	1.60	1.47	1.42	1.23	0.37	2.61	2.39	1.58
LESS: PERS CONT FOR SOC INS...	18644	18763	18777	18884	19069	19106	19148	19189	19404	19423	19434	19458	19650	16290	18767	19128	19430
% Chg Prev Qtr SAAR.....	66.86	2.58	0.31	2.29	3.98	0.78	0.86	0.87	4.56	0.40	0.22	0.50	4.00	1.25	15.21	1.92	1.58
% Chg Same Qtr Last Yr.....	14.13	15.01	16.59	15.12	2.28	1.83	1.97	1.62	1.76	1.66	1.50	1.40	1.27	1.25	15.21	1.92	1.58
RESIDENCE ADJUSTMENT.....	-1427	-1457	-1458	-1463	-1465	-1467	-1468	-1471	-1472	-1474	-1474	-1475	-1475	-1414	-1451	-1468	-1474
% Chg Prev Qtr SAAR.....	-28.14	8.79	0.13	1.36	0.69	0.36	0.49	0.58	0.39	0.42	0.26	0.24	-0.01	37.73	2.66	1.14	0.41
% Chg Same Qtr Last Yr.....	8.57	4.65	4.32	-5.62	2.68	0.63	0.73	0.53	0.45	0.47	0.41	0.32	0.23	37.73	2.66	1.14	0.41
PER CAPITA PERSONAL INCOME (\$)...	36419	36737	36734	36935	37097	37275	37451	37633	37777	37956	38109	38261	38362	36543	36706	37364	38026
% Chg Prev Qtr SAAR.....	-5.45	3.54	-0.03	2.21	1.76	1.93	1.91	1.96	1.54	1.91	1.62	1.60	1.06	2.28	0.45	1.79	1.77
% Chg Same Qtr Last Yr.....	0.01	0.60	1.18	0.01	1.86	1.46	1.95	1.89	1.83	1.83	1.76	1.67	1.55	2.28	0.45	1.79	1.77

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 4: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars)

January 2014

	History		Forecast Data											Annual			
	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TN PERSONAL INCOME.....	253123	255937	257825	260369	263071	266126	269105	272078	274929	278030	281073	284138	287019	250189	256814	267595	279543
% Chg Prev Qtr SAAR.....	-3.40	4.52	2.98	4.01	4.22	4.73	4.55	4.49	4.26	4.59	4.45	4.43	4.12	5.29	2.65	4.20	4.46
% Chg Same Qtr Last Yr.....	2.46	2.76	3.41	1.98	3.93	3.98	4.37	4.50	4.51	4.47	4.45	4.43	4.40	5.29	2.65	4.20	4.46
WAGES AND SALARIES.....	124069	125057	125550	126868	128219	129653	131081	132549	134017	135440	136841	138250	139626	121857	125386	130375	136137
% Chg Prev Qtr SAAR.....	-1.22	3.22	1.58	4.27	4.33	4.55	4.48	4.56	4.51	4.31	4.20	4.18	4.04	5.48	2.90	3.98	4.42
% Chg Same Qtr Last Yr.....	2.92	3.01	3.74	1.94	3.35	3.67	4.41	4.48	4.52	4.46	4.39	4.30	4.18	5.48	2.90	3.98	4.42
OTHER LABOR INCOME.....	29777	29943	30099	30241	30450	30661	30911	31163	31388	31642	31931	32252	32598	29117	30015	30796	31803
% Chg Prev Qtr SAAR.....	2.75	2.24	2.10	1.90	2.80	2.80	3.30	3.30	2.92	3.28	3.70	4.09	4.36	6.97	3.08	2.60	3.27
% Chg Same Qtr Last Yr.....	3.93	3.03	3.15	2.25	2.26	2.40	2.70	3.05	3.08	3.20	3.30	3.50	3.86	6.97	3.08	2.60	3.27
PROPRIETORS INCOME.....	32878	33090	33451	33784	34256	34775	35302	35820	36356	36892	37431	37978	38495	31554	33301	35038	37164
% Chg Prev Qtr SAAR.....	9.30	2.61	4.43	4.05	5.71	6.20	6.20	5.99	6.13	6.03	5.97	5.97	5.56	8.18	5.54	5.22	6.07
% Chg Same Qtr Last Yr.....	4.89	5.62	6.57	5.07	4.19	5.09	5.54	6.02	6.13	6.09	6.03	6.02	5.88	8.18	5.54	5.22	6.07
RENT, INTEREST, DIVIDENDS.....	35131	36003	36443	36928	37402	37842	38334	38803	39265	39809	40355	40847	41371	34710	36126	38095	40069
% Chg Prev Qtr SAAR.....	-10.16	10.30	4.98	5.43	5.23	4.79	5.30	4.99	4.84	5.67	5.59	4.97	5.23	5.43	4.08	5.45	5.18
% Chg Same Qtr Last Yr.....	3.86	4.61	5.59	2.34	6.46	5.11	5.19	5.08	4.98	5.20	5.27	5.27	5.36	5.43	4.08	5.45	5.18
TRANSFER PAYMENTS.....	52726	53455	54015	54437	54907	55492	55905	56299	56785	57241	57621	58044	58489	51719	53658	55651	57423
% Chg Prev Qtr SAAR.....	4.09	5.65	4.25	3.16	3.50	4.33	3.01	2.85	3.50	3.25	2.68	2.97	3.10	2.22	3.75	3.71	3.18
% Chg Same Qtr Last Yr.....	2.80	3.63	4.27	4.28	4.14	3.81	3.50	3.42	3.42	3.15	3.07	3.10	3.00	2.22	3.75	3.71	3.18
LESS: PERS CONT FOR SOC INS....	19932	20054	20165	20314	20582	20708	20831	20950	21269	21373	21476	21595	21914	17269	20116	20768	21428
% Chg Prev Qtr SAAR.....	68.67	2.46	2.25	2.99	5.38	2.46	2.40	2.31	6.24	1.97	1.94	2.23	6.05	3.12	16.49	3.24	3.18
% Chg Same Qtr Last Yr.....	15.68	16.24	17.90	16.15	3.26	3.26	3.30	3.13	3.34	3.21	3.10	3.08	3.03	3.12	16.49	3.24	3.18
RESIDENCE ADJUSTMENT.....	-1526	-1558	-1566	-1574	-1582	-1590	-1598	-1606	-1614	-1621	-1629	-1637	-1645	-1499	-1556	-1594	-1625
% Chg Prev Qtr SAAR.....	-27.37	8.67	2.06	2.05	2.04	2.03	2.02	2.01	2.00	1.99	1.98	1.97	1.96	40.27	3.78	2.44	2.00
% Chg Same Qtr Last Yr.....	10.05	5.76	5.50	-4.78	3.67	2.05	2.04	2.03	2.02	2.01	2.00	1.98	1.97	40.27	3.78	2.44	2.00
PER CAPITA PERSONAL INCOME (\$)...	38935	39264	39449	39733	40040	40398	40743	41086	41408	41766	42113	42463	42783	38739	39345	40567	41938
% Chg Prev Qtr SAAR.....	-4.42	3.42	1.90	2.91	3.12	3.63	3.46	3.40	3.17	3.50	3.37	3.36	3.05	4.17	1.56	3.10	3.38
% Chg Same Qtr Last Yr.....	1.37	1.67	2.32	0.90	2.84	2.89	3.28	3.40	3.42	3.39	3.36	3.35	3.32	4.17	1.56	3.10	3.38

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 5: Tennessee Nonfarm Employment by Sector, Not Seasonally Adjusted (thousands of jobs)

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL NONFARM.....	2762.0	2752.8	2786.9	2743.5	2792.5	2805.5	2840.5	2795.5	2844.4	2856.6	2890.4	2842.6	2714.3	2755.5	2795.5	2846.7
% Chg Same Qtr Last Yr.....	1.64	1.48	1.11	0.85	1.10	1.91	1.92	1.89	1.86	1.82	1.76	1.69	2.02	1.52	1.45	1.83
NATURAL RESOURCES, MINING & CONSTRUCTION.....	109.8	110.4	108.8	105.5	109.9	114.1	112.9	108.9	113.5	117.8	116.6	112.5	109.2	108.5	110.6	114.2
% Chg Same Qtr Last Yr.....	0.18	-1.02	-1.15	0.47	0.05	3.33	3.78	3.31	3.33	3.19	3.19	3.23	0.51	-0.65	1.92	3.25
MANUFACTURING.....	320.1	322.3	322.3	320.8	323.8	324.9	324.8	322.9	325.5	326.3	325.8	323.9	313.5	320.3	323.6	325.1
% Chg Same Qtr Last Yr.....	2.04	1.99	1.76	1.32	1.16	0.81	0.80	0.66	0.53	0.41	0.31	0.31	2.97	2.19	1.02	0.48
DURABLE GOODS.....	200.0	201.9	201.9	201.7	203.9	205.2	205.4	204.9	206.9	207.9	207.8	207.2	194.1	200.4	204.0	206.9
% Chg Same Qtr Last Yr.....	3.11	2.84	2.46	2.02	1.92	1.64	1.72	1.62	1.47	1.32	1.17	1.10	5.63	3.26	1.82	1.39
NONDURABLE GOODS.....	120.1	120.4	120.3	119.2	120.0	119.7	119.4	118.0	118.7	118.4	118.0	116.8	119.4	120.0	119.6	118.3
% Chg Same Qtr Last Yr.....	0.31	0.61	0.62	0.16	-0.11	-0.57	-0.76	-0.98	-1.07	-1.14	-1.16	-1.05	-1.08	0.45	-0.32	-1.09
TRADE, TRANSPORTATION, UTILITIES.....	581.9	583.7	593.9	579.1	589.3	591.5	601.5	585.7	595.7	597.5	607.0	592.4	575.0	583.7	590.4	596.5
% Chg Same Qtr Last Yr.....	1.60	1.70	0.89	0.66	1.28	1.35	1.27	1.15	1.07	1.00	0.92	1.13	2.04	1.51	1.14	1.04
WHOLESALE TRADE.....	119.2	120.1	119.4	118.1	120.1	121.0	120.7	119.6	121.6	122.5	122.2	121.4	120.7	119.4	120.0	121.5
% Chg Same Qtr Last Yr.....	-1.43	-1.02	-1.75	-0.48	0.78	0.72	1.05	1.31	1.22	1.26	1.25	1.50	2.38	-1.10	0.52	1.26
RETAIL TRADE.....	320.7	322.0	330.9	320.3	326.5	326.0	333.4	321.7	327.9	327.1	334.5	323.2	313.3	322.2	326.6	327.8
% Chg Same Qtr Last Yr.....	2.79	3.36	2.69	1.61	1.81	1.25	0.78	0.46	0.42	0.33	0.31	0.45	1.32	2.85	1.36	0.38
TRANSPORTATION & UTILITIES.....	142.0	141.6	143.7	140.7	142.7	144.5	147.4	144.3	146.2	147.8	150.4	147.7	141.1	142.2	143.8	147.2
% Chg Same Qtr Last Yr.....	1.57	0.38	-0.83	-0.52	0.50	2.10	2.58	2.61	2.44	2.29	2.02	2.35	3.38	0.77	1.17	2.34
INFORMATION.....	42.3	42.0	42.3	42.8	42.7	42.6	42.9	43.1	42.8	42.8	43.1	43.4	43.0	42.2	42.7	42.9
% Chg Same Qtr Last Yr.....	-3.42	-1.64	-0.69	1.80	0.89	1.48	1.22	0.61	0.26	0.41	0.49	0.73	-1.66	-1.97	1.35	0.44
FINANCIAL ACTIVITIES.....	139.3	140.1	140.1	138.7	140.3	141.5	141.8	140.3	141.6	142.4	142.3	140.6	137.6	139.5	140.6	141.6
% Chg Same Qtr Last Yr.....	0.89	1.35	1.93	0.19	0.73	0.98	1.17	1.15	0.92	0.62	0.38	0.22	0.80	1.36	0.77	0.76
PROFESSIONAL & BUSINESS SERVICES.....	349.6	346.8	355.7	345.7	353.2	359.8	370.6	361.8	370.0	376.7	387.5	375.8	336.5	348.6	357.3	374.0
% Chg Same Qtr Last Yr.....	4.37	2.81	2.35	0.93	1.04	3.75	4.19	4.66	4.77	4.70	4.55	3.85	4.51	3.60	2.49	4.67
EDUCATION & HEALTH SERVICES.....	400.7	399.7	407.2	405.9	407.6	408.3	415.9	414.7	416.4	417.3	425.3	424.3	394.1	401.5	409.4	418.4
% Chg Same Qtr Last Yr.....	2.15	1.74	1.58	1.86	1.72	2.16	2.15	2.17	2.17	2.20	2.26	2.32	2.56	1.88	1.97	2.20
LEISURE & HOSPITALITY.....	295.9	297.8	289.3	281.8	304.2	306.7	298.1	290.1	313.0	315.4	306.5	298.3	277.2	288.9	297.7	306.3
% Chg Same Qtr Last Yr.....	4.25	4.65	4.12	3.42	2.80	3.01	3.04	2.95	2.89	2.84	2.84	2.80	3.59	4.20	3.06	2.88
OTHER SERVICES.....	105.3	104.6	104.7	103.5	105.8	105.8	105.5	104.0	106.2	106.2	105.9	104.3	104.3	104.8	105.1	105.6
% Chg Same Qtr Last Yr.....	0.22	-0.25	0.19	-0.97	0.50	1.09	0.80	0.51	0.40	0.40	0.42	0.26	2.20	0.45	0.36	0.43
GOVERNMENT.....	417.1	405.4	422.5	419.8	415.7	410.2	426.5	423.9	419.6	414.3	430.3	427.3	423.8	417.5	418.0	422.0
% Chg Same Qtr Last Yr.....	-1.49	-1.28	-1.76	-1.24	-0.34	1.17	0.94	0.97	0.94	1.00	0.90	0.80	-0.93	-1.48	0.12	0.95
FEDERAL, CIVILIAN.....	48.6	48.6	42.6	43.2	46.5	47.5	41.8	42.7	46.0	47.1	41.4	41.8	49.9	47.2	44.8	44.3
% Chg Same Qtr Last Yr.....	-2.99	-2.67	-13.97	-11.67	-4.38	-2.13	-1.95	-1.15	-1.01	-0.96	-1.02	-2.11	-1.24	-5.49	-5.14	-1.03
STATE & LOCAL.....	368.4	356.9	380.4	376.8	369.1	362.5	385.3	381.5	373.4	367.0	389.7	385.8	373.9	370.5	373.4	377.9
% Chg Same Qtr Last Yr.....	-1.29	-1.09	-0.05	0.18	0.17	1.58	1.29	1.23	1.17	1.23	1.13	1.15	-0.88	-0.91	0.80	1.19

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 6: Tennessee Durable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)**January 2014**

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL DURABLE GOODS.....	200.0	201.9	201.9	201.7	203.9	205.2	205.4	204.9	206.9	207.9	207.8	207.2	194.1	200.4	204.0	206.9
% Chg Same Qtr Last Yr.....	3.11	2.84	2.46	2.02	1.92	1.64	1.72	1.62	1.47	1.32	1.17	1.10	5.63	3.26	1.82	1.39
WOOD PRODUCTS.....	10.8	10.8	10.8	10.5	10.8	10.9	10.8	10.5	10.8	11.0	10.9	10.6	11.1	10.8	10.8	10.8
% Chg Same Qtr Last Yr.....	-2.70	-4.41	-1.98	-1.87	-0.38	0.99	-0.02	0.32	0.53	0.67	0.75	0.62	2.47	-2.45	-0.31	0.57
NONMETALLIC MINERAL PRODUCTS.....	12.7	12.8	12.7	12.5	12.8	12.9	12.8	12.8	13.1	13.2	13.1	13.0	12.5	12.7	12.8	13.1
% Chg Same Qtr Last Yr.....	2.14	1.06	0.51	-0.28	0.53	1.09	0.97	2.09	2.37	2.51	2.53	2.20	5.65	1.80	0.58	2.38
PRIMARY METALS.....	10.2	10.2	10.4	10.3	10.4	10.5	10.6	10.5	10.6	10.7	10.8	10.7	9.7	10.2	10.4	10.7
% Chg Same Qtr Last Yr.....	5.88	4.07	5.21	1.73	1.91	2.12	1.52	2.07	2.10	2.14	2.18	2.10	5.16	5.81	1.82	2.12
FABRICATED METAL PRODUCTS.....	33.9	34.0	33.8	33.9	34.1	34.2	34.2	34.2	34.5	34.6	34.5	34.5	34.4	33.8	34.1	34.4
% Chg Same Qtr Last Yr.....	-2.12	-1.54	-0.62	0.79	0.56	0.71	1.29	1.04	1.04	1.01	0.94	0.96	2.38	-1.63	0.83	1.01
MACHINERY.....	25.8	25.4	25.2	25.9	26.6	26.3	26.0	26.6	27.2	26.9	26.5	27.1	25.5	25.4	26.2	26.8
% Chg Same Qtr Last Yr.....	-1.28	-0.65	1.74	2.95	2.95	3.58	3.11	2.54	2.42	2.28	2.13	1.79	1.33	-0.26	3.15	2.35
COMPUTER & ELECTRONIC PRODUCTS....	5.9	5.8	5.8	5.7	5.7	5.6	5.7	5.6	5.5	5.5	5.5	5.4	5.8	5.8	5.7	5.5
% Chg Same Qtr Last Yr.....	0.00	2.34	-1.05	-2.30	-3.23	-4.03	-3.07	-2.46	-2.41	-2.39	-2.40	-2.46	3.87	0.45	-3.16	-2.41
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	18.4	18.5	18.6	18.6	18.7	18.9	18.9	18.9	19.0	19.1	19.1	19.1	17.9	18.4	18.8	19.0
% Chg Same Qtr Last Yr.....	2.79	2.78	3.54	2.28	1.81	2.41	1.72	1.54	1.37	1.21	1.05	1.02	1.42	2.89	2.05	1.29
TRANSPORTATION EQUIPMENT.....	58.2	60.1	60.5	60.1	60.5	61.5	62.1	61.7	61.8	62.6	63.0	62.5	53.6	59.1	61.0	62.2
% Chg Same Qtr Last Yr.....	11.00	9.01	5.76	4.11	3.90	2.31	2.66	2.58	2.16	1.79	1.47	1.42	16.99	10.29	3.23	1.99
FURNITURE.....	8.9	9.1	8.9	8.9	9.0	9.1	9.0	9.0	9.0	9.1	9.0	8.9	8.8	8.9	9.0	9.0
% Chg Same Qtr Last Yr.....	0.38	3.03	1.83	1.77	1.05	0.08	1.25	0.62	0.30	0.01	-0.26	-0.40	-2.05	1.79	1.03	0.17
MISCELLANEOUS DURABLE GOODS.....	15.2	15.3	15.2	15.2	15.4	15.4	15.4	15.2	15.3	15.3	15.3	15.2	15.0	15.2	15.3	15.3
% Chg Same Qtr Last Yr.....	1.79	2.46	1.60	1.60	1.02	0.58	0.78	-0.03	-0.27	-0.40	-0.43	-0.05	-1.75	1.46	0.99	-0.28

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 7: Tennessee Nondurable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL NONDURABLE GOODS.....	120.1	120.4	120.3	119.2	120.0	119.7	119.4	118.0	118.7	118.4	118.0	116.8	119.4	120.0	119.6	118.3
% Chg Same Qtr Last Yr.....	0.31	0.61	0.62	0.16	-0.11	-0.57	-0.76	-0.98	-1.07	-1.14	-1.16	-1.05	-1.08	0.45	-0.32	-1.09
FOOD.....	33.2	33.4	33.7	33.4	33.4	33.6	33.8	33.5	33.5	33.6	33.9	33.6	33.3	33.3	33.6	33.6
% Chg Same Qtr Last Yr.....	0.10	0.70	0.87	1.27	0.57	0.54	0.57	0.24	0.15	0.08	0.05	0.26	0.45	0.17	0.74	0.13
BEVERAGE & TOBACCO.....	5.3	5.4	5.4	5.4	5.4	5.5	5.4	5.4	5.4	5.4	5.4	5.3	5.2	5.3	5.4	5.4
% Chg Same Qtr Last Yr.....	3.23	1.89	3.49	3.12	1.50	1.32	0.76	-0.03	-0.44	-0.77	-1.01	-1.13	3.83	2.64	1.66	-0.56
TEXTILE MILLS, TEXTILE MILL PRODUCTS & APPAREL.....	10.7	10.7	10.7	10.5	10.7	10.7	10.6	10.3	10.5	10.5	10.4	10.1	10.8	10.7	10.6	10.4
% Chg Same Qtr Last Yr.....	-0.31	-1.54	-1.42	-1.42	-0.26	0.44	-1.00	-1.62	-1.87	-2.06	-2.20	-1.98	0.62	-0.59	-0.56	-1.94
PAPER.....	14.2	14.3	14.1	13.8	13.9	14.1	13.8	13.4	13.6	13.7	13.4	13.1	14.7	14.2	13.9	13.5
% Chg Same Qtr Last Yr.....	-4.27	-4.04	-2.72	-2.71	-1.78	-1.19	-2.33	-2.60	-2.65	-2.66	-2.65	-2.60	-3.98	-3.34	-2.00	-2.64
PRINTING & RELATED SUPPORT.....	8.9	8.7	8.6	8.4	8.4	8.2	8.1	7.9	7.9	7.7	7.7	7.4	9.5	8.8	8.3	7.8
% Chg Same Qtr Last Yr.....	-6.97	-8.45	-7.81	-6.61	-5.71	-4.99	-5.63	-5.83	-5.87	-5.94	-6.03	-6.34	-4.61	-7.28	-5.74	-5.91
CHEMICALS.....	24.3	24.2	24.2	24.0	24.0	24.0	23.8	23.6	23.6	23.5	23.4	23.2	24.3	24.2	23.9	23.5
% Chg Same Qtr Last Yr.....	-0.27	-0.68	-0.61	-1.00	-1.23	-1.14	-1.35	-1.62	-1.70	-1.72	-1.69	-1.37	-0.92	-0.49	-1.18	-1.68
PLASTICS & RUBBER.....	19.9	20.0	20.0	19.9	20.1	19.9	20.1	20.1	20.3	20.1	20.3	20.2	19.9	20.0	20.0	20.2
% Chg Same Qtr Last Yr.....	-0.99	0.67	-1.06	-0.92	0.93	-0.39	0.57	0.96	1.07	1.12	1.09	0.82	-2.57	0.27	0.05	1.06
MISCELLANEOUS NONDURABLE GOODS....	3.5	3.8	3.7	3.9	4.0	3.7	3.7	3.8	4.0	3.7	3.6	3.8	1.8	3.4	3.8	3.8
% Chg Same Qtr Last Yr.....	100.00	113.21	108.08	43.32	14.23	-0.87	-0.26	-0.72	-1.41	-1.87	-2.11	-1.33	6.57	94.45	11.92	-1.52

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 8: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL NONFARM.....	2758.3	2749.0	2762.2	2775.4	2788.6	2801.5	2815.3	2828.2	2840.4	2852.3	2864.7	2876.1	2715.0	2755.3	2795.2	2846.4
% Chg Prev Qtr SAAR.....	0.97	-1.34	1.92	1.93	1.92	1.86	1.99	1.84	1.74	1.69	1.75	1.60	2.03	1.49	1.45	1.83
% Chg Same Qtr Last Yr.....	1.67	1.21	1.12	0.86	1.10	1.91	1.92	1.90	1.86	1.82	1.76	1.70	2.03	1.49	1.45	1.83
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	109.9	107.4	107.9	109.2	110.0	111.0	112.0	112.8	113.7	114.5	115.5	116.4	109.4	108.5	110.5	114.1
% Chg Prev Qtr SAAR.....	4.74	-8.90	1.81	4.88	3.00	3.66	3.57	3.00	3.10	3.11	3.55	3.16	0.69	-0.84	1.89	3.26
% Chg Same Qtr Last Yr.....	0.33	-1.29	-1.15	0.47	0.05	3.33	3.77	3.31	3.33	3.19	3.19	3.23	0.69	-0.84	1.89	3.26
MANUFACTURING.....	319.7	321.3	321.9	322.6	323.3	323.9	324.4	324.7	325.1	325.3	325.5	325.8	313.5	320.3	323.6	325.1
% Chg Prev Qtr SAAR.....	1.52	2.11	0.66	0.95	0.88	0.75	0.61	0.37	0.38	0.29	0.20	0.37	2.97	2.19	1.02	0.48
% Chg Same Qtr Last Yr.....	1.99	2.03	1.79	1.31	1.15	0.81	0.80	0.65	0.53	0.41	0.31	0.31	2.97	2.19	1.02	0.48
DURABLE GOODS.....	199.8	201.2	201.8	202.7	203.6	204.5	205.3	206.0	206.6	207.2	207.7	208.2	194.1	200.4	204.0	206.9
% Chg Prev Qtr SAAR.....	2.25	2.83	1.20	1.80	1.86	1.70	1.54	1.38	1.24	1.10	0.95	1.11	5.62	3.26	1.82	1.39
% Chg Same Qtr Last Yr.....	3.09	2.85	2.45	2.02	1.92	1.64	1.72	1.62	1.47	1.32	1.17	1.10	5.62	3.26	1.82	1.39
NONDURABLE GOODS.....	119.9	120.1	120.1	119.9	119.7	119.5	119.2	118.8	118.4	118.1	117.8	117.5	119.4	120.0	119.6	118.3
% Chg Prev Qtr SAAR.....	0.31	0.93	-0.24	-0.45	-0.75	-0.86	-0.97	-1.36	-1.09	-1.10	-1.11	-0.92	-1.08	0.46	-0.33	-1.09
% Chg Same Qtr Last Yr.....	0.21	0.69	0.69	0.14	-0.13	-0.57	-0.76	-0.98	-1.07	-1.13	-1.17	-1.06	-1.08	0.46	-0.33	-1.09
TRADE, TRANSPORTATION, UTILITIES.....	581.5	583.0	585.7	587.2	588.9	590.9	593.1	593.9	595.2	596.8	598.6	600.7	575.3	583.4	590.0	596.1
% Chg Prev Qtr SAAR.....	-1.25	1.06	1.86	1.01	1.19	1.35	1.54	0.54	0.87	1.05	1.23	1.39	2.07	1.41	1.14	1.04
% Chg Same Qtr Last Yr.....	1.29	1.49	0.89	0.66	1.28	1.35	1.27	1.15	1.07	1.00	0.92	1.13	2.07	1.41	1.14	1.04
WHOLESALE TRADE.....	118.8	119.2	119.2	119.3	119.7	120.1	120.5	120.9	121.2	121.6	122.0	122.7	120.7	119.3	119.9	121.4
% Chg Prev Qtr SAAR.....	-3.51	1.35	0.15	0.16	1.47	1.12	1.46	1.20	1.10	1.30	1.40	2.21	2.37	-1.19	0.52	1.26
% Chg Same Qtr Last Yr.....	-1.52	-1.62	-1.75	-0.48	0.78	0.72	1.05	1.31	1.22	1.26	1.25	1.50	2.37	-1.19	0.52	1.26
RETAIL TRADE.....	320.2	322.6	324.8	325.6	326.0	326.6	327.3	327.1	327.3	327.7	328.3	328.6	313.5	322.0	326.4	327.6
% Chg Prev Qtr SAAR.....	-0.33	3.07	2.71	1.04	0.44	0.84	0.82	-0.26	0.29	0.49	0.73	0.31	1.37	2.71	1.36	0.38
% Chg Same Qtr Last Yr.....	2.29	3.28	2.69	1.61	1.81	1.25	0.78	0.46	0.42	0.33	0.31	0.45	1.37	2.71	1.36	0.38
TRANSPORTATION & UTILITIES.....	142.5	141.2	141.7	142.3	143.2	144.2	145.3	146.0	146.7	147.5	148.3	149.4	141.0	142.1	143.7	147.1
% Chg Prev Qtr SAAR.....	-1.39	-3.60	1.36	1.66	2.69	2.69	3.27	1.80	2.00	2.10	2.20	3.12	3.39	0.75	1.16	2.34
% Chg Same Qtr Last Yr.....	1.50	0.19	-0.83	-0.52	0.50	2.10	2.58	2.61	2.44	2.29	2.02	2.35	3.39	0.75	1.16	2.34
INFORMATION.....	42.3	42.1	42.3	42.6	42.7	42.8	42.8	42.8	42.8	42.9	43.0	43.1	43.0	42.1	42.7	42.9
% Chg Prev Qtr SAAR.....	5.20	-1.88	1.65	2.34	1.50	0.43	0.64	-0.11	0.08	1.01	0.98	0.86	-1.69	-2.09	1.35	0.44
% Chg Same Qtr Last Yr.....	-3.13	-1.63	-0.69	1.80	0.89	1.48	1.22	0.61	0.26	0.41	0.49	0.73	-1.69	-2.09	1.35	0.44
FINANCIAL ACTIVITIES.....	139.4	139.5	139.7	140.0	140.4	140.9	141.3	141.6	141.7	141.8	141.9	141.9	137.6	139.6	140.7	141.7
% Chg Prev Qtr SAAR.....	-0.95	0.38	0.43	0.90	1.20	1.40	1.20	0.80	0.27	0.23	0.21	0.17	0.73	1.48	0.77	0.77
% Chg Same Qtr Last Yr.....	1.28	1.33	1.93	0.19	0.73	0.98	1.17	1.15	0.92	0.62	0.38	0.22	0.73	1.48	0.77	0.77

(CONTINUED ON NEXT PAGE)

Table 8: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
PROFESSIONAL & BUSINESS SERVICES..	351.7	346.0	348.3	351.6	355.4	359.0	362.9	368.0	372.3	375.9	379.4	382.2	336.6	348.6	357.2	373.9
% Chg Prev Qtr SAAR.....	3.88	-6.29	2.59	3.90	4.33	4.20	4.35	5.77	4.77	3.92	3.77	2.96	4.51	3.55	2.47	4.67
% Chg Same Qtr Last Yr.....	4.70	2.02	2.35	0.93	1.04	3.75	4.19	4.66	4.77	4.70	4.55	3.85	4.51	3.55	2.47	4.67
EDUCATION & HEALTH SERVICES.....	401.5	401.8	404.0	406.2	408.4	410.5	412.7	415.0	417.3	419.5	422.0	424.6	394.1	401.5	409.4	418.4
% Chg Prev Qtr SAAR.....	2.77	0.30	2.17	2.21	2.20	2.07	2.13	2.27	2.22	2.18	2.36	2.52	2.51	1.89	1.97	2.20
% Chg Same Qtr Last Yr.....	2.14	2.06	1.58	1.86	1.72	2.16	2.15	2.17	2.17	2.20	2.26	2.32	2.51	1.89	1.97	2.20
LEISURE & HOSPITALITY.....	288.7	290.3	292.3	294.5	296.7	299.0	301.2	303.2	305.3	307.5	309.7	311.6	277.2	289.0	297.8	306.4
% Chg Prev Qtr SAAR.....	5.64	2.24	2.79	3.06	3.10	3.07	2.92	2.70	2.86	2.90	2.91	2.52	3.55	4.26	3.06	2.88
% Chg Same Qtr Last Yr.....	4.30	4.85	4.12	3.42	2.80	3.01	3.04	2.95	2.89	2.84	2.84	2.80	3.55	4.26	3.06	2.88
OTHER SERVICES.....	104.6	104.1	104.5	104.9	105.2	105.3	105.4	105.5	105.6	105.7	105.8	105.8	104.2	104.8	105.2	105.6
% Chg Prev Qtr SAAR.....	-4.94	-1.90	1.52	1.60	0.80	0.43	0.38	0.42	0.36	0.44	0.45	-0.20	2.12	0.59	0.35	0.43
% Chg Same Qtr Last Yr.....	0.32	-0.32	0.19	-0.97	0.50	1.09	0.80	0.51	0.40	0.40	0.42	0.26	2.12	0.59	0.35	0.43
GOVERNMENT.....	419.0	413.4	415.7	416.7	417.6	418.2	419.6	420.7	421.5	422.4	423.4	424.1	424.2	417.5	418.0	422.0
% Chg Prev Qtr SAAR.....	-2.69	-5.27	2.24	0.93	0.93	0.60	1.29	1.07	0.79	0.87	0.88	0.68	-0.80	-1.57	0.13	0.95
% Chg Same Qtr Last Yr.....	-1.32	-2.32	-1.76	-1.24	-0.34	1.17	0.94	0.97	0.94	1.00	0.90	0.80	-0.80	-1.57	0.13	0.95
FEDERAL, CIVILIAN.....	46.5	45.2	44.9	44.7	44.4	44.2	44.0	44.2	44.0	43.8	43.6	43.2	50.3	46.8	44.3	43.9
% Chg Prev Qtr SAAR.....	-28.70	-10.73	-2.28	-2.14	-2.09	-2.01	-1.56	1.09	-1.54	-1.79	-1.80	-3.31	-0.02	-7.00	-5.23	-1.03
% Chg Same Qtr Last Yr.....	-6.76	-8.88	-13.97	-11.67	-4.38	-2.13	-1.95	-1.15	-1.01	-0.96	-1.02	-2.11	-0.02	-7.00	-5.23	-1.03
STATE & LOCAL.....	372.6	368.2	370.8	372.0	373.2	374.0	375.6	376.6	377.6	378.7	379.8	380.9	373.9	370.7	373.7	378.1
% Chg Prev Qtr SAAR.....	1.34	-4.57	2.81	1.31	1.29	0.91	1.63	1.07	1.06	1.19	1.19	1.14	-0.91	-0.84	0.80	1.19
% Chg Same Qtr Last Yr.....	-0.60	-1.45	-0.05	0.18	0.17	1.58	1.29	1.22	1.17	1.24	1.13	1.14	-0.91	-0.84	0.80	1.19
STATISTICAL DISCREPANCY (%).....	0.02	0.04	-	-	-	-	-	-	-	-	-	-	-0.01	-	-	-

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 9: Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)**January 2014**

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL DURABLE GOODS.....	199.8	201.2	201.8	202.7	203.6	204.5	205.3	206.0	206.6	207.2	207.7	208.2	194.1	200.4	204.0	206.9
% Chg Prev Qtr SAAR.....	2.25	2.83	1.20	1.80	1.86	1.70	1.54	1.38	1.24	1.10	0.95	1.11	5.62	3.26	1.82	1.39
% Chg Same Qtr Last Yr.....	3.09	2.85	2.45	2.02	1.92	1.64	1.72	1.62	1.47	1.32	1.17	1.10	5.62	3.26	1.82	1.39
WOOD PRODUCTS.....	10.8	10.6	10.8	10.8	10.7	10.7	10.8	10.8	10.8	10.8	10.8	10.9	11.1	10.8	10.8	10.8
% Chg Prev Qtr SAAR.....	-6.08	-5.33	4.40	-0.11	-0.26	0.02	0.29	1.24	0.58	0.59	0.60	0.70	2.47	-2.45	-0.33	0.57
% Chg Same Qtr Last Yr.....	-2.78	-4.39	-1.98	-1.87	-0.38	0.99	-0.02	0.32	0.53	0.67	0.75	0.62	2.47	-2.45	-0.33	0.57
NONMETALLIC MINERALS.....	12.7	12.6	12.7	12.7	12.7	12.8	12.8	13.0	13.0	13.1	13.2	13.2	12.5	12.7	12.8	13.1
% Chg Prev Qtr SAAR.....	-2.04	-0.67	2.46	-0.80	1.17	1.57	1.98	3.67	2.26	2.15	2.04	2.38	5.66	1.80	0.58	2.37
% Chg Same Qtr Last Yr.....	2.10	1.10	0.51	-0.28	0.53	1.09	0.97	2.09	2.37	2.51	2.53	2.20	5.66	1.80	0.58	2.37
PRIMARY METALS.....	10.2	10.2	10.4	10.4	10.4	10.5	10.5	10.6	10.6	10.7	10.7	10.8	9.7	10.2	10.4	10.7
% Chg Prev Qtr SAAR.....	1.34	1.24	4.53	-0.11	2.04	2.07	2.10	2.06	2.17	2.21	2.26	1.75	5.16	5.79	1.82	2.12
% Chg Same Qtr Last Yr.....	5.82	4.07	5.21	1.73	1.91	2.12	1.52	2.07	2.10	2.14	2.18	2.10	5.16	5.79	1.82	2.12
FABRICATED METALS.....	33.9	33.9	33.8	34.0	34.1	34.1	34.2	34.3	34.4	34.5	34.5	34.7	34.4	33.8	34.1	34.4
% Chg Prev Qtr SAAR.....	1.81	0.34	-1.32	2.36	0.89	0.93	0.97	1.38	0.90	0.79	0.68	1.48	2.36	-1.65	0.83	1.01
% Chg Same Qtr Last Yr.....	-2.17	-1.56	-0.62	0.79	0.56	0.71	1.29	1.04	1.04	1.01	0.94	0.96	2.36	-1.65	0.83	1.01
MACHINERY.....	25.4	25.4	25.6	25.9	26.1	26.3	26.4	26.6	26.7	26.9	27.0	27.1	25.5	25.4	26.2	26.8
% Chg Prev Qtr SAAR.....	2.67	0.06	4.34	4.78	2.67	2.56	2.45	2.49	2.18	2.02	1.86	1.12	1.32	-0.27	3.15	2.34
% Chg Same Qtr Last Yr.....	-1.39	-0.64	1.74	2.95	2.95	3.58	3.11	2.54	2.42	2.28	2.13	1.79	1.32	-0.27	3.15	2.34
COMPUTERS & ELECTRONICS.....	5.9	5.9	5.8	5.7	5.7	5.6	5.6	5.6	5.5	5.5	5.5	5.4	5.8	5.8	5.7	5.5
% Chg Prev Qtr SAAR.....	1.15	0.74	-6.29	-4.59	-2.64	-2.56	-2.49	-2.13	-2.45	-2.49	-2.52	-2.40	3.89	0.49	-3.16	-2.41
% Chg Same Qtr Last Yr.....	-0.04	2.41	-1.05	-2.30	-3.23	-4.03	-3.07	-2.46	-2.41	-2.39	-2.40	-2.46	3.89	0.49	-3.16	-2.41
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	18.4	18.4	18.6	18.7	18.8	18.8	18.9	19.0	19.0	19.1	19.1	19.2	17.9	18.4	18.8	19.0
% Chg Prev Qtr SAAR.....	3.74	-0.71	4.24	1.93	1.83	1.65	1.47	1.23	1.14	0.99	0.84	1.10	1.41	2.88	2.05	1.29
% Chg Same Qtr Last Yr.....	2.72	2.80	3.54	2.28	1.81	2.41	1.72	1.54	1.37	1.21	1.05	1.02	1.41	2.88	2.05	1.29
TRANSPORTATION EQUIP.....	58.6	59.9	60.0	60.3	60.8	61.3	61.6	61.9	62.1	62.4	62.5	62.8	53.6	59.1	61.0	62.2
% Chg Prev Qtr SAAR.....	4.23	9.45	1.07	1.91	3.38	2.90	2.44	1.60	1.70	1.42	1.14	1.40	17.00	10.30	3.23	2.00
% Chg Same Qtr Last Yr.....	10.99	8.99	5.76	4.11	3.90	2.31	2.66	2.58	2.16	1.79	1.47	1.42	17.00	10.30	3.23	2.00
FURNITURE.....	8.9	9.0	8.9	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	8.8	8.9	9.0	9.0
% Chg Prev Qtr SAAR.....	4.10	4.76	-4.04	2.50	1.17	0.83	0.50	-0.02	-0.09	-0.34	-0.59	-0.58	-2.07	1.78	1.03	0.17
% Chg Same Qtr Last Yr.....	0.32	3.06	1.83	1.77	1.05	0.08	1.25	0.62	0.30	0.01	-0.26	-0.40	-2.07	1.78	1.03	0.17
MISCELLANEOUS DURABLES.....	15.2	15.2	15.2	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.0	15.2	15.3	15.3
% Chg Prev Qtr SAAR.....	3.08	2.20	-0.73	1.88	0.76	0.41	0.06	-1.35	-0.20	-0.12	-0.03	0.13	-1.75	1.45	0.99	-0.28
% Chg Same Qtr Last Yr.....	1.77	2.47	1.60	1.60	1.02	0.58	0.78	-0.03	-0.27	-0.40	-0.43	-0.05	-1.75	1.45	0.99	-0.28

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 10: Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL NONDURABLE GOODS.....	119.9	120.1	120.1	119.9	119.7	119.5	119.2	118.8	118.4	118.1	117.8	117.5	119.4	120.0	119.6	118.3
% Chg Prev Qtr SAAR.....	0.31	0.93	-0.24	-0.45	-0.75	-0.86	-0.97	-1.36	-1.09	-1.10	-1.11	-0.92	-1.08	0.46	-0.33	-1.09
% Chg Same Qtr Last Yr.....	0.21	0.69	0.69	0.14	-0.13	-0.57	-0.76	-0.98	-1.07	-1.13	-1.17	-1.06	-1.08	0.46	-0.33	-1.09
FOOD.....	33.4	33.4	33.4	33.5	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.7	33.3	33.3	33.6	33.6
% Chg Prev Qtr SAAR.....	3.32	0.50	0.13	1.16	0.50	0.38	0.25	-0.17	0.12	0.12	0.11	0.67	0.46	0.17	0.74	0.13
% Chg Same Qtr Last Yr.....	0.10	0.73	0.87	1.27	0.57	0.54	0.57	0.24	0.15	0.08	0.05	0.26	0.46	0.17	0.74	0.13
BEVERAGE & TOBACCO.....	5.3	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.3	5.2	5.3	5.4	5.4
% Chg Prev Qtr SAAR.....	7.53	1.14	2.16	1.78	0.91	0.42	-0.07	-1.36	-0.73	-0.90	-1.07	-1.81	3.84	2.65	1.66	-0.56
% Chg Same Qtr Last Yr.....	3.23	1.88	3.49	3.12	1.50	1.32	0.76	-0.03	-0.44	-0.77	-1.01	-1.13	3.84	2.65	1.66	-0.56
TEXTILE MILLS, TEXTILE MILL																
PRODUCTS & APPAREL.....	10.7	10.6	10.7	10.7	10.6	10.6	10.6	10.5	10.4	10.4	10.3	10.3	10.8	10.7	10.6	10.4
% Chg Prev Qtr SAAR.....	-5.52	-4.03	4.21	-0.06	-1.00	-1.31	-1.62	-2.55	-2.01	-2.08	-2.15	-1.68	0.62	-0.59	-0.57	-1.94
% Chg Same Qtr Last Yr.....	-0.32	-1.54	-1.42	-1.42	-0.26	0.44	-1.00	-1.62	-1.87	-2.06	-2.20	-1.98	0.62	-0.59	-0.57	-1.94
PAPER.....	14.2	14.0	14.1	14.0	14.0	13.9	13.8	13.7	13.6	13.5	13.4	13.3	14.7	14.2	13.9	13.5
% Chg Prev Qtr SAAR.....	-6.08	-4.81	2.07	-1.81	-2.43	-2.50	-2.57	-2.91	-2.61	-2.57	-2.53	-2.68	-3.98	-3.33	-2.00	-2.64
% Chg Same Qtr Last Yr.....	-4.29	-4.05	-2.72	-2.71	-1.78	-1.19	-2.33	-2.60	-2.65	-2.66	-2.65	-2.60	-3.98	-3.33	-2.00	-2.64
PRINTING & RELATED SUPPORT.....	8.9	8.7	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.7	7.6	7.5	9.5	8.8	8.3	7.8
% Chg Prev Qtr SAAR.....	-9.40	-8.71	-3.34	-4.86	-5.86	-5.88	-5.90	-5.66	-6.03	-6.15	-6.28	-6.88	-4.61	-7.28	-5.75	-5.91
% Chg Same Qtr Last Yr.....	-6.97	-8.47	-7.81	-6.61	-5.71	-4.99	-5.63	-5.83	-5.87	-5.94	-6.03	-6.34	-4.61	-7.28	-5.75	-5.91
CHEMICALS.....	24.3	24.2	24.1	24.0	24.0	23.9	23.8	23.7	23.6	23.5	23.4	23.3	24.3	24.2	23.9	23.5
% Chg Prev Qtr SAAR.....	-0.38	-1.77	-0.68	-1.18	-1.27	-1.41	-1.54	-2.26	-1.59	-1.50	-1.40	-1.00	-0.92	-0.50	-1.18	-1.68
% Chg Same Qtr Last Yr.....	-0.29	-0.71	-0.61	-1.00	-1.23	-1.14	-1.35	-1.62	-1.70	-1.72	-1.69	-1.37	-0.92	-0.50	-1.18	-1.68
PLASTICS & RUBBER.....	19.8	20.1	20.0	20.0	20.0	20.0	20.1	20.2	20.2	20.2	20.3	20.3	19.9	20.0	20.0	20.2
% Chg Prev Qtr SAAR.....	-6.62	6.13	-2.92	0.17	0.53	0.71	0.89	1.72	0.97	0.88	0.79	0.62	-2.57	0.27	0.04	1.06
% Chg Same Qtr Last Yr.....	-1.04	0.76	-1.06	-0.92	0.93	-0.39	0.57	0.96	1.07	1.12	1.09	0.82	-2.57	0.27	0.04	1.06
MISCELLANEOUS NONDURABLE GOODS.....	3.4	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7	1.8	3.4	3.8	3.8
% Chg Prev Qtr SAAR.....	150.94	76.86	-3.00	-2.00	1.26	0.32	-0.60	-3.79	-1.53	-1.54	-1.55	-0.69	6.54	94.71	11.57	-1.53
% Chg Same Qtr Last Yr.....	99.30	113.97	108.09	43.32	14.23	-0.87	-0.26	-0.72	-1.41	-1.87	-2.11	-1.33	6.54	94.71	11.57	-1.53

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 11: Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (2009 dollars)

January 2014

	History		Forecast Data											Annual			
	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL NONFARM.....	42349	42055	42160	42013	42991	42536	42648	42447	43438	42980	43058	42812	43754	42036	42144	42656	43072
% Chg Same Qtr Last Yr.....	-0.30	0.29	1.11	-0.06	1.52	1.15	1.16	1.03	1.04	1.04	0.96	0.86	0.73	1.57	0.26	1.21	0.98
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	47078	45325	44409	45585	47362	46095	45148	46261	48474	47002	45738	46691	48807	46040	45599	46216	46976
% Chg Same Qtr Last Yr.....	-4.79	-0.92	1.43	0.89	0.60	1.70	1.66	1.48	2.35	1.97	1.31	0.93	0.69	0.78	-0.96	1.35	1.64
MANUFACTURING.....	51516	51499	51742	52004	52492	52206	52213	52432	52882	52611	52619	52801	53210	51726	51690	52336	52728
% Chg Same Qtr Last Yr.....	-0.73	-3.11	3.72	0.06	1.89	1.37	0.91	0.82	0.74	0.78	0.78	0.70	0.62	1.86	-0.07	1.25	0.75
DURABLE GOODS.....	49845	49839	50160	50469	50951	50744	50718	51001	51388	51171	51136	51369	51707	51305	50078	50853	51266
% Chg Same Qtr Last Yr.....	-3.12	-7.47	2.76	-1.22	2.22	1.81	1.11	1.05	0.86	0.84	0.82	0.72	0.62	3.21	-2.39	1.55	0.81
NONDURABLE GOODS.....	54292	54263	54394	54580	55100	54691	54776	54894	55475	55119	55225	55322	55877	52416	54383	54865	55285
% Chg Same Qtr Last Yr.....	3.22	4.35	5.33	2.17	1.49	0.79	0.70	0.57	0.68	0.78	0.82	0.78	0.72	0.02	3.75	0.89	0.77
TRADE, TRANSPORTATION, UTILITIES.....	38838	38692	38586	38279	39446	38987	39069	38689	39885	39403	39465	39034	40206	38826	38599	39048	39447
% Chg Same Qtr Last Yr.....	-1.18	-0.48	0.51	-1.17	1.56	0.76	1.25	1.07	1.11	1.07	1.01	0.89	0.80	0.65	-0.59	1.16	1.02
WHOLESALE TRADE.....	59569	59995	59470	60344	61175	60572	60464	61047	61930	61279	61153	61676	62508	58769	59845	60814	61510
% Chg Same Qtr Last Yr.....	1.74	3.95	4.55	-2.55	2.70	0.96	1.67	1.16	1.23	1.17	1.14	1.03	0.93	2.36	1.83	1.62	1.14
RETAIL TRADE.....	26282	25984	26101	25676	26654	26214	26355	25869	26829	26384	26506	25990	26923	26744	26011	26273	26427
% Chg Same Qtr Last Yr.....	-4.41	-3.94	-1.45	-1.04	1.42	0.89	0.97	0.75	0.65	0.65	0.57	0.47	0.35	-0.83	-2.74	1.01	0.59
TRANSPORTATION & UTILITIES.....	49430	49511	49259	48940	50332	50039	49834	49369	50717	50407	50157	49634	50929	48611	49285	49894	50229
% Chg Same Qtr Last Yr.....	0.91	1.07	0.99	2.59	1.83	1.07	1.17	0.88	0.77	0.73	0.65	0.54	0.42	-0.01	1.39	1.23	0.67
INFORMATION.....	56442	56719	56790	56847	56613	56974	57250	57120	56930	57346	57606	57462	57239	55450	56699	56989	57336
% Chg Same Qtr Last Yr.....	1.27	3.19	2.62	1.96	0.30	0.45	0.81	0.48	0.56	0.65	0.62	0.60	0.54	2.23	2.25	0.51	0.61
FINANCIAL ACTIVITIES.....	62278	62565	62546	63057	64147	63849	63788	64093	65098	64767	64642	64878	65815	63258	62612	63969	64846
% Chg Same Qtr Last Yr.....	1.70	-3.88	1.18	-2.81	3.00	2.05	1.98	1.64	1.48	1.44	1.34	1.22	1.10	4.77	-1.02	2.17	1.37
PROFESSIONAL & BUSINESS SERVICES.....	50320	50047	50089	49495	51702	51385	51218	50507	52712	52390	52183	51410	53595	48971	49987	51203	52174
% Chg Same Qtr Last Yr.....	1.82	4.99	2.53	-0.90	2.75	2.67	2.25	2.05	1.96	1.96	1.89	1.79	1.67	5.79	2.08	2.43	1.90
EDUCATION & HEALTH SERVICES.....	43788	43798	44199	43729	44295	44418	44685	44209	44692	44842	45066	44549	44983	42797	43879	44402	44787
% Chg Same Qtr Last Yr.....	0.51	3.37	2.53	3.77	1.16	1.41	1.10	1.10	0.90	0.95	0.85	0.77	0.65	-0.33	2.53	1.19	0.87
LEISURE & HOSPITALITY.....	20114	18778	18796	19577	20282	18962	18985	19713	20454	19147	19172	19903	20602	20169	19316	19485	19669
% Chg Same Qtr Last Yr.....	-5.06	-4.63	-3.37	-3.79	0.83	0.98	1.01	0.70	0.85	0.97	0.99	0.96	0.72	0.80	-4.23	0.88	0.94
OTHER SERVICES.....	37021	36946	36891	37041	37586	36773	36779	36881	37418	36633	36635	36723	37235	37332	36975	37005	36852
% Chg Same Qtr Last Yr.....	-1.45	-2.51	-0.03	0.22	1.53	-0.47	-0.31	-0.43	-0.45	-0.38	-0.39	-0.43	-0.49	-0.02	-0.96	0.08	-0.41
GOVERNMENT.....	39010	39728	40241	38896	39289	39774	40390	39001	39385	39920	40545	39121	39421	39218	39469	39614	39743
% Chg Same Qtr Last Yr.....	0.48	2.28	-1.05	0.93	0.71	0.12	0.37	0.27	0.24	0.37	0.38	0.31	0.09	-0.04	0.64	0.37	0.33
FEDERAL, CIVILIAN.....	67039	67121	64424	73253	72021	66586	64883	73639	72328	67198	65727	74553	73060	67382	67959	69282	69951
% Chg Same Qtr Last Yr.....	-1.56	-0.52	-3.97	9.55	7.43	-0.80	0.71	0.53	0.43	0.92	1.30	1.24	1.01	-0.88	0.86	1.95	0.97
STATE & LOCAL.....	35367	36112	36950	34997	35512	36408	37196	35185	35668	36574	37343	35293	35741	35459	35857	36075	36220
% Chg Same Qtr Last Yr.....	1.12	3.19	-0.17	0.42	0.41	0.82	0.67	0.54	0.44	0.46	0.40	0.31	0.20	0.21	1.12	0.61	0.40

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 12: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)

January 2014

	History		Forecast Data											Annual			
	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL NONFARM.....	41867	42110	42217	42389	42498	42596	42709	42827	42936	43040	43122	43196	43244	42024	42146	42657	43074
% Chg Prev Qtr SAAR.....	-5.09	2.34	1.02	1.64	1.03	0.92	1.07	1.11	1.02	0.98	0.77	0.69	0.44	1.56	0.29	1.21	0.98
% Chg Same Qtr Last Yr.....	-0.39	0.26	1.38	-0.07	1.51	1.15	1.16	1.03	1.03	1.04	0.97	0.86	0.72	1.56	0.29	1.21	0.98
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	45475	45270	45663	45989	45750	46039	46423	46671	46824	46945	47030	47105	47145	45924	45599	46220	46976
% Chg Prev Qtr SAAR.....	-0.95	-1.79	3.51	2.89	-2.07	2.56	3.38	2.15	1.32	1.04	0.73	0.63	0.34	0.64	-0.71	1.36	1.63
% Chg Same Qtr Last Yr.....	-4.17	-1.07	1.71	0.89	0.60	1.70	1.66	1.48	2.35	1.97	1.31	0.93	0.69	0.64	-0.71	1.36	1.63
MANUFACTURING.....	51219	51574	51896	52066	52197	52285	52369	52493	52587	52690	52776	52861	52914	51723	51689	52336	52728
% Chg Prev Qtr SAAR.....	-6.21	2.80	2.52	1.32	1.01	0.68	0.65	0.95	0.72	0.79	0.65	0.65	0.40	1.87	-0.07	1.25	0.75
% Chg Same Qtr Last Yr.....	-0.72	-3.06	3.69	0.04	1.91	1.38	0.91	0.82	0.75	0.77	0.78	0.70	0.62	1.87	-0.07	1.25	0.75
DURABLE GOODS.....	49588	49898	50335	50498	50691	50802	50895	51029	51128	51231	51315	51396	51445	51302	50080	50854	51267
% Chg Prev Qtr SAAR.....	-11.45	2.52	3.55	1.30	1.54	0.88	0.74	1.06	0.78	0.81	0.66	0.63	0.38	3.21	-2.38	1.55	0.81
% Chg Same Qtr Last Yr.....	-3.12	-7.45	2.75	-1.22	2.22	1.81	1.11	1.05	0.86	0.84	0.82	0.72	0.62	3.21	-2.38	1.55	0.81
NONDURABLE GOODS.....	53925	54368	54509	54700	54741	54807	54892	55014	55117	55236	55338	55444	55519	52413	54375	54863	55284
% Chg Prev Qtr SAAR.....	2.61	3.33	1.05	1.40	0.30	0.48	0.62	0.89	0.75	0.86	0.74	0.77	0.54	0.03	3.74	0.90	0.77
% Chg Same Qtr Last Yr.....	3.25	4.45	5.25	2.09	1.51	0.81	0.70	0.57	0.69	0.78	0.81	0.78	0.73	0.03	3.74	0.90	0.77
TRADE, TRANSPORTATION, UTILITIES....	38303	38721	38630	38818	38902	39016	39114	39234	39336	39432	39510	39583	39652	38807	38618	39066	39465
% Chg Prev Qtr SAAR.....	-9.55	4.43	-0.93	1.96	0.87	1.17	1.00	1.23	1.05	0.98	0.79	0.74	0.70	0.62	-0.49	1.16	1.02
% Chg Same Qtr Last Yr.....	-1.30	-0.18	0.72	-1.17	1.56	0.76	1.25	1.07	1.11	1.07	1.01	0.89	0.80	0.62	-0.49	1.16	1.02
WHOLESALE TRADE.....	58973	60197	59936	60443	60563	60776	60937	61147	61310	61486	61632	61778	61882	58752	59887	60856	61551
% Chg Prev Qtr SAAR.....	-18.29	8.56	-1.72	3.43	0.79	1.41	1.07	1.39	1.07	1.15	0.96	0.95	0.68	2.37	1.93	1.62	1.14
% Chg Same Qtr Last Yr.....	1.43	4.04	5.19	-2.55	2.70	0.96	1.67	1.16	1.23	1.17	1.14	1.03	0.93	2.37	1.93	1.62	1.14
RETAIL TRADE.....	25853	26027	26050	26158	26219	26258	26304	26354	26391	26428	26454	26477	26483	26715	26022	26284	26437
% Chg Prev Qtr SAAR.....	-8.48	2.72	0.35	1.68	0.93	0.60	0.70	0.77	0.55	0.57	0.39	0.36	0.09	-0.89	-2.59	1.01	0.58
% Chg Same Qtr Last Yr.....	-4.43	-3.48	-1.37	-1.04	1.42	0.89	0.97	0.75	0.65	0.65	0.57	0.47	0.35	-0.89	-2.59	1.01	0.58
TRANSPORTATION & UTILITIES.....	48876	49337	49387	49637	49769	49864	49963	50071	50150	50230	50287	50340	50360	48620	49309	49917	50252
% Chg Prev Qtr SAAR.....	4.16	3.83	0.40	2.03	1.07	0.76	0.80	0.87	0.63	0.64	0.45	0.42	0.16	-0.01	1.42	1.23	0.67
% Chg Same Qtr Last Yr.....	0.75	1.15	1.18	2.59	1.83	1.07	1.17	0.88	0.77	0.73	0.65	0.54	0.42	-0.01	1.42	1.23	0.67
INFORMATION.....	56757	56719	56610	56891	56929	56974	57069	57164	57248	57346	57424	57507	57559	55427	56744	57034	57381
% Chg Prev Qtr SAAR.....	7.05	-0.27	-0.77	2.00	0.27	0.31	0.67	0.67	0.59	0.68	0.55	0.58	0.36	2.27	2.38	0.51	0.61
% Chg Same Qtr Last Yr.....	2.07	2.87	2.61	1.96	0.30	0.45	0.81	0.48	0.56	0.65	0.62	0.60	0.54	2.27	2.38	0.51	0.61
FINANCIAL ACTIVITIES.....	61713	62520	62800	63256	63565	63803	64047	64296	64508	64721	64904	65083	65219	63298	62573	63928	64804
% Chg Prev Qtr SAAR.....	-19.18	5.33	1.80	2.94	1.97	1.50	1.54	1.57	1.32	1.33	1.14	1.11	0.84	4.85	-1.15	2.17	1.37
% Chg Same Qtr Last Yr.....	1.58	-4.25	1.20	-2.81	3.00	2.05	1.98	1.64	1.48	1.44	1.34	1.22	1.10	4.85	-1.15	2.17	1.37

(CONTINUED ON NEXT PAGE)

Table 12: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)

January 2014

	History		Forecast Data											Annual			
	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
PROFESSIONAL & BUSINESS SERVICES.....	49477	49743	50195	50557	50836	51073	51326	51591	51830	52073	52294	52513	52697	48956	49993	51206	52177
% Chg Prev Qtr SAAR.....	-11.53	2.17	3.68	2.92	2.23	1.88	2.00	2.08	1.87	1.89	1.71	1.68	1.41	5.83	2.12	2.43	1.90
% Chg Same Qtr Last Yr.....	1.60	4.66	3.32	-0.90	2.75	2.67	2.25	2.05	1.96	1.96	1.89	1.79	1.67	5.83	2.12	2.43	1.90
EDUCATION & HEALTH SERVICES.....	43755	43711	43968	44077	44262	44329	44452	44561	44659	44752	44831	44904	44949	42796	43878	44401	44786
% Chg Prev Qtr SAAR.....	12.59	-0.40	2.37	1.00	1.69	0.61	1.11	0.98	0.88	0.84	0.70	0.66	0.40	-0.28	2.53	1.19	0.87
% Chg Same Qtr Last Yr.....	0.80	3.38	2.21	3.77	1.16	1.41	1.10	1.10	0.90	0.95	0.85	0.77	0.65	-0.28	2.53	1.19	0.87
LEISURE & HOSPITALITY.....	19250	19250	19281	19377	19410	19440	19475	19512	19575	19629	19667	19700	19717	20152	19289	19459	19643
% Chg Prev Qtr SAAR.....	-16.56	0.02	0.64	2.00	0.69	0.60	0.74	0.76	1.30	1.10	0.78	0.67	0.34	0.81	-4.28	0.88	0.94
% Chg Same Qtr Last Yr.....	-5.08	-4.67	-3.56	-3.79	0.83	0.98	1.01	0.70	0.85	0.97	0.99	0.96	0.72	0.81	-4.28	0.88	0.94
OTHER SERVICES.....	36497	37170	37068	37088	37054	36996	36955	36928	36888	36855	36811	36770	36708	37364	36956	36983	36831
% Chg Prev Qtr SAAR.....	-5.41	7.58	-1.08	0.21	-0.37	-0.63	-0.44	-0.29	-0.44	-0.36	-0.48	-0.45	-0.67	0.07	-1.09	0.07	-0.41
% Chg Same Qtr Last Yr.....	-1.97	-2.60	0.03	0.22	1.53	-0.47	-0.31	-0.43	-0.45	-0.38	-0.39	-0.43	-0.49	0.07	-1.09	0.07	-0.41
GOVERNMENT.....	39303	39542	39466	39536	39584	39588	39612	39643	39681	39733	39764	39765	39717	39168	39462	39607	39736
% Chg Prev Qtr SAAR.....	1.35	2.45	-0.76	0.71	0.48	0.04	0.24	0.32	0.38	0.53	0.31	0.01	-0.48	-0.17	0.75	0.37	0.33
% Chg Same Qtr Last Yr.....	-0.02	2.11	0.01	0.93	0.71	0.12	0.37	0.27	0.24	0.37	0.38	0.31	0.09	-0.17	0.75	0.37	0.33
FEDERAL, CIVILIAN.....	64829	70251	69274	69510	69647	69691	69767	69877	69944	70331	70675	70744	70652	66914	68466	69745	70424
% Chg Prev Qtr SAAR.....	8.97	37.89	-5.45	1.37	0.79	0.25	0.44	0.63	0.38	2.23	1.97	0.39	-0.52	-2.04	2.32	1.87	0.97
% Chg Same Qtr Last Yr.....	-5.75	3.49	2.57	9.55	7.43	-0.80	0.71	0.53	0.43	0.92	1.30	1.24	1.01	-2.04	2.32	1.87	0.97
STATE & LOCAL.....	35827	35711	35810	35906	35974	36004	36048	36099	36132	36168	36190	36210	36207	35442	35814	36031	36175
% Chg Prev Qtr SAAR.....	0.81	-1.28	1.10	1.08	0.76	0.33	0.49	0.57	0.37	0.40	0.24	0.22	-0.03	0.24	1.05	0.61	0.40
% Chg Same Qtr Last Yr.....	1.14	2.47	0.20	0.42	0.41	0.82	0.66	0.54	0.44	0.46	0.39	0.31	0.21	0.24	1.05	0.61	0.40

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 13: Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (current dollars)**January 2014**

	History		Forecast Data											Annual			
	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL NONFARM.....	45275	44947	45276	45195	46402	46101	46397	46341	47613	47295	47583	47513	48796	44561	45173	46310	47501
% Chg Same Qtr Last Yr.....	1.06	1.36	2.25	0.84	2.49	2.57	2.48	2.53	2.61	2.59	2.56	2.53	2.48	3.45	1.37	2.52	2.57
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	50331	48443	47691	49038	51120	49958	49116	50505	53133	51720	50544	51818	54431	48800	48876	50175	51804
% Chg Same Qtr Last Yr.....	-3.49	0.13	2.57	1.79	1.57	3.13	2.99	2.99	3.94	3.53	2.91	2.60	2.44	2.66	0.15	2.66	3.25
MANUFACTURING.....	55075	55041	55566	55944	56656	56581	56803	57243	57964	57892	58148	58599	59342	54832	55406	56821	58151
% Chg Same Qtr Last Yr.....	0.63	-2.08	4.89	0.96	2.87	2.80	2.23	2.32	2.31	2.32	2.37	2.37	2.38	3.75	1.05	2.55	2.34
DURABLE GOODS.....	53289	53267	53867	54292	54993	54996	55176	55680	56328	56308	56509	57010	57666	54384	53679	55211	56539
% Chg Same Qtr Last Yr.....	-1.80	-6.48	3.92	-0.34	3.20	3.25	2.43	2.56	2.43	2.39	2.42	2.39	2.38	5.12	-1.30	2.86	2.40
NONDURABLE GOODS.....	58043	57996	58415	58715	59471	59274	59591	59930	60807	60652	61027	61398	62316	55567	58292	59567	60971
% Chg Same Qtr Last Yr.....	4.63	5.46	6.51	3.08	2.46	2.20	2.01	2.07	2.25	2.33	2.41	2.45	2.48	1.88	4.90	2.19	2.36
TRADE, TRANSPORTATION, UTILITIES.....	41521	41353	41438	41179	42575	42254	42503	42239	43719	43358	43612	43320	44839	41158	41373	42393	43502
% Chg Same Qtr Last Yr.....	0.16	0.58	1.64	-0.28	2.54	2.18	2.57	2.57	2.69	2.61	2.61	2.56	2.56	2.51	0.52	2.47	2.62
WHOLESALE TRADE.....	63685	64121	63866	64915	66029	65648	65779	66647	67882	67430	67579	68449	69712	62305	64147	66026	67835
% Chg Same Qtr Last Yr.....	3.13	5.06	5.73	-1.68	3.68	2.38	3.00	2.67	2.81	2.72	2.74	2.70	2.70	4.26	2.96	2.93	2.74
RETAIL TRADE.....	28098	27771	28030	27621	28769	28411	28672	28242	29407	29032	29291	28844	30026	28348	27880	28524	29144
% Chg Same Qtr Last Yr.....	-3.11	-2.92	-0.34	-0.15	2.39	2.31	2.29	2.25	2.22	2.19	2.16	2.13	2.10	1.00	-1.65	2.31	2.17
TRANSPORTATION & UTILITIES.....	52845	52917	52900	52647	54326	54233	54214	53898	55592	55467	55427	55084	56799	51530	52827	54168	55392
% Chg Same Qtr Last Yr.....	2.29	2.15	2.13	3.51	2.80	2.49	2.48	2.38	2.33	2.28	2.24	2.20	2.17	1.85	2.52	2.54	2.26
INFORMATION.....	60342	60620	60987	61153	61105	61748	62282	62360	62402	63102	63659	63772	63836	58782	60775	61874	63234
% Chg Same Qtr Last Yr.....	2.65	4.29	3.78	2.87	1.26	1.86	2.12	1.97	2.12	2.19	2.21	2.26	2.30	4.12	3.39	1.81	2.20
FINANCIAL ACTIVITIES.....	66581	66869	67169	67834	69236	69200	69395	69974	71355	71268	71434	72002	73400	67063	67113	69451	71515
% Chg Same Qtr Last Yr.....	3.08	-2.86	2.32	-1.95	3.99	3.49	3.31	3.16	3.06	2.99	2.94	2.90	2.87	6.71	0.07	3.48	2.97
PROFESSIONAL & BUSINESS SERVICES.....	53796	53489	53791	53244	55803	55691	55720	55141	57779	57649	57667	57055	59771	51915	53580	55589	57537
% Chg Same Qtr Last Yr.....	3.21	6.11	3.69	-0.01	3.73	4.12	3.59	3.56	3.54	3.52	3.49	3.47	3.45	7.77	3.21	3.75	3.51
EDUCATION & HEALTH SERVICES.....	46813	46811	47466	47042	47810	48140	48613	48265	48988	49343	49802	49442	50167	45367	47033	48207	49393
% Chg Same Qtr Last Yr.....	1.88	4.47	3.68	4.70	2.13	2.84	2.42	2.60	2.46	2.50	2.44	2.44	2.41	1.52	3.67	2.50	2.46
LEISURE & HOSPITALITY.....	21503	20069	20185	21060	21891	20551	20653	21522	22420	21069	21187	22089	22976	21380	20704	21154	21691
% Chg Same Qtr Last Yr.....	-3.77	-3.61	-2.28	-2.93	1.80	2.40	2.32	2.19	2.42	2.52	2.58	2.63	2.48	2.67	-3.16	2.17	2.54
OTHER SERVICES.....	39579	39487	39618	39847	40568	39855	40012	40265	41014	40311	40485	40755	41526	39574	39632	40175	40641
% Chg Same Qtr Last Yr.....	-0.11	-1.47	1.09	1.11	2.50	0.93	0.99	1.05	1.10	1.14	1.18	1.22	1.25	1.83	0.15	1.37	1.16
GOVERNMENT.....	41705	42461	43216	41842	42406	43108	43940	42580	43170	43927	44806	43417	43964	41575	42306	43008	43830
% Chg Same Qtr Last Yr.....	1.85	3.37	0.07	1.83	1.68	1.52	1.68	1.76	1.80	1.90	1.97	1.97	1.84	1.81	1.76	1.66	1.91
FEDERAL, CIVILIAN.....	71671	71738	69186	78801	77735	72166	70587	80395	79280	73943	72634	82739	81479	71430	72849	75221	77149
% Chg Same Qtr Last Yr.....	-0.22	0.54	-2.88	10.53	8.46	0.60	2.02	2.02	1.99	2.46	2.90	2.92	2.77	0.95	1.99	3.26	2.56
STATE & LOCAL.....	37810	38596	39681	37648	38330	39459	40466	38413	39096	40246	41267	39169	39860	37590	38434	39167	39945
% Chg Same Qtr Last Yr.....	2.50	4.29	0.95	1.32	1.37	2.24	1.98	2.03	2.00	1.99	1.98	1.97	1.95	2.06	2.24	1.91	1.99

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 14: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)

January 2014

	History		Forecast Data											Annual			
	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL NONFARM.....	44760	45007	45338	45600	45870	46165	46463	46756	47063	47361	47654	47940	48228	44549	45176	46313	47504
% Chg Prev Qtr SAAR.....	-4.07	2.23	2.97	2.34	2.39	2.60	2.60	2.55	2.65	2.56	2.50	2.42	2.43	3.44	1.41	2.52	2.57
% Chg Same Qtr Last Yr.....	0.97	1.33	2.52	0.82	2.48	2.57	2.48	2.54	2.60	2.59	2.56	2.53	2.48	3.44	1.41	2.52	2.57
NATURAL RESOURCES, MINING & CONSTRUCTION...	48617	48384	49038	49473	49379	49897	50504	50952	51324	51657	51972	52277	52578	48681	48878	50183	51808
% Chg Prev Qtr SAAR.....	0.12	-1.90	5.51	3.60	-0.75	4.26	4.95	3.60	2.95	2.62	2.46	2.37	2.32	2.51	0.40	2.67	3.24
% Chg Same Qtr Last Yr.....	-2.87	-0.02	2.85	1.79	1.57	3.13	2.99	2.99	3.94	3.53	2.91	2.60	2.44	2.51	0.40	2.67	3.24
MANUFACTURING.....	54758	55121	55731	56010	56338	56666	56972	57309	57641	57979	58321	58666	59012	54829	55405	56821	58152
% Chg Prev Qtr SAAR.....	-5.20	2.68	4.50	2.01	2.37	2.35	2.18	2.38	2.34	2.37	2.38	2.38	2.38	3.75	1.05	2.56	2.34
% Chg Same Qtr Last Yr.....	0.64	-2.03	4.86	0.93	2.89	2.80	2.23	2.32	2.31	2.32	2.37	2.37	2.38	3.75	1.05	2.56	2.34
DURABLE GOODS.....	53014	53330	54055	54323	54713	55059	55369	55711	56042	56373	56707	57040	57373	54382	53681	55213	56540
% Chg Prev Qtr SAAR.....	-10.50	2.40	5.55	2.00	2.90	2.56	2.27	2.49	2.40	2.39	2.39	2.37	2.36	5.12	-1.29	2.85	2.40
% Chg Same Qtr Last Yr.....	-1.80	-6.46	3.91	-0.33	3.20	3.24	2.43	2.55	2.43	2.39	2.42	2.39	2.38	5.12	-1.29	2.85	2.40
NONDURABLE GOODS.....	57651	58107	58538	58843	59084	59400	59717	60061	60415	60780	61153	61533	61917	55564	58285	59566	60970
% Chg Prev Qtr SAAR.....	3.7228	3.2052	3.00	2.10	1.65	2.16	2.15	2.33	2.37	2.44	2.48	2.51	2.52	1.89	4.90	2.20	2.36
% Chg Same Qtr Last Yr.....	4.6576	5.5593	6.44	3.01	2.49	2.22	2.01	2.07	2.25	2.32	2.41	2.45	2.49	1.89	4.90	2.20	2.36
TRADE, TRANSPORTATION, UTILITIES.....	40950	41384	41485	41758	41989	42286	42552	42833	43117	43390	43661	43929	44222	41140	41394	42415	43524
% Chg Prev Qtr SAAR.....	-8.57	4.31	0.98	2.66	2.23	2.86	2.54	2.67	2.67	2.56	2.52	2.48	2.69	2.48	0.62	2.47	2.62
% Chg Same Qtr Last Yr.....	0.04	0.88	1.86	-0.28	2.54	2.18	2.57	2.57	2.69	2.61	2.61	2.56	2.56	2.48	0.62	2.47	2.62
WHOLESALE TRADE.....	63047	64337	64366	65022	65368	65869	66294	66757	67202	67657	68108	68561	69014	62287	64193	66072	67882
% Chg Prev Qtr SAAR.....	-17.41	8.44	0.18	4.14	2.14	3.10	2.61	2.83	2.69	2.74	2.69	2.69	2.67	4.27	3.06	2.93	2.74
% Chg Same Qtr Last Yr.....	2.81	5.15	6.38	-1.68	3.68	2.38	3.00	2.67	2.81	2.72	2.74	2.70	2.70	4.27	3.06	2.93	2.74
RETAIL TRADE.....	27639	27817	27975	28140	28299	28458	28616	28772	28927	29081	29233	29385	29535	28319	27893	28536	29156
% Chg Prev Qtr SAAR.....	-7.49	2.60	2.29	2.38	2.28	2.27	2.23	2.20	2.17	2.14	2.12	2.09	2.06	0.93	-1.51	2.31	2.17
% Chg Same Qtr Last Yr.....	-3.13	-2.45	-0.26	-0.15	2.39	2.31	2.29	2.25	2.22	2.19	2.16	2.13	2.10	0.93	-1.51	2.31	2.17
TRANSPORTATION & UTILITIES.....	52253	52731	53038	53397	53718	54042	54355	54665	54970	55272	55571	55868	56163	51541	52855	54195	55420
% Chg Prev Qtr SAAR.....	5.28	3.71	2.35	2.74	2.43	2.44	2.34	2.30	2.25	2.21	2.18	2.16	2.13	1.84	2.55	2.54	2.26
% Chg Same Qtr Last Yr.....	2.12	2.23	2.33	3.51	2.80	2.49	2.48	2.38	2.33	2.28	2.24	2.20	2.17	1.84	2.55	2.54	2.26
INFORMATION.....	60679	60620	60794	61201	61446	61748	62085	62409	62750	63102	63458	63822	64192	58758	60823	61922	63283
% Chg Prev Qtr SAAR.....	8.21	-0.39	1.15	2.70	1.61	1.98	2.20	2.10	2.20	2.26	2.28	2.31	2.34	4.16	3.52	1.81	2.20
% Chg Same Qtr Last Yr.....	3.46	3.97	3.77	2.87	1.26	1.86	2.12	1.97	2.12	2.19	2.21	2.26	2.30	4.16	3.52	1.81	2.20
FINANCIAL ACTIVITIES.....	65977	66821	67442	68048	68608	69150	69677	70195	70708	71217	71724	72230	72735	67106	67072	69408	71470
% Chg Prev Qtr SAAR.....	-18.31	5.21	3.77	3.64	3.33	3.20	3.08	3.01	2.95	2.91	2.88	2.85	2.82	6.79	-0.05	3.48	2.97
% Chg Same Qtr Last Yr.....	2.97	-3.23	2.34	-1.95	3.99	3.49	3.31	3.16	3.06	2.99	2.94	2.90	2.87	6.79	-0.05	3.48	2.97

(CONTINUED ON NEXT PAGE)

Table 14: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)

January 2014

	History		Forecast Data											Annual			
	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
PROFESSIONAL & BUSINESS SERVICES.....	52896	53164	53905	54386	54869	55353	55838	56324	56811	57300	57789	58279	58770	51902	53588	55596	57545
% Chg Prev Qtr SAAR.....	-10.57	2.05	5.69	3.62	3.60	3.57	3.55	3.53	3.51	3.48	3.46	3.44	3.41	7.81	3.25	3.75	3.51
% Chg Same Qtr Last Yr.....	2.99	5.78	4.48	-0.01	3.73	4.12	3.59	3.56	3.54	3.52	3.49	3.47	3.45	7.81	3.25	3.75	3.51
EDUCATION & HEALTH SERVICES.....	46778	46717	47217	47416	47774	48044	48359	48649	48951	49245	49541	49835	50130	45367	47032	48207	49393
% Chg Prev Qtr SAAR.....	13.81	-0.52	4.35	1.69	3.05	2.29	2.65	2.42	2.50	2.42	2.43	2.39	2.38	1.56	3.67	2.50	2.46
% Chg Same Qtr Last Yr.....	2.17	4.49	3.36	4.70	2.13	2.84	2.42	2.60	2.46	2.50	2.44	2.44	2.41	1.56	3.67	2.50	2.46
LEISURE & HOSPITALITY.....	20579	20574	20706	20845	20950	21069	21187	21302	21457	21599	21734	21863	21989	21363	20676	21127	21663
% Chg Prev Qtr SAAR.....	-15.65	-0.10	2.59	2.70	2.04	2.28	2.27	2.19	2.93	2.68	2.52	2.40	2.32	2.67	-3.21	2.18	2.54
% Chg Same Qtr Last Yr.....	-3.79	-3.66	-2.47	-2.93	1.80	2.40	2.32	2.19	2.42	2.52	2.58	2.63	2.48	2.67	-3.21	2.18	2.54
OTHER SERVICES.....	39018	39726	39808	39898	39994	40096	40204	40316	40433	40555	40679	40807	40938	39608	39612	40152	40619
% Chg Prev Qtr SAAR.....	-4.39	7.46	0.83	0.90	0.97	1.03	1.08	1.13	1.17	1.20	1.24	1.26	1.29	1.92	0.01	1.36	1.16
% Chg Same Qtr Last Yr.....	-0.63	-1.56	1.16	1.11	2.50	0.93	0.99	1.05	1.10	1.14	1.18	1.22	1.25	1.92	0.01	1.36	1.16
GOVERNMENT.....	42018	42261	42383	42531	42724	42905	43094	43281	43494	43721	43942	44132	44294	41522	42298	43001	43822
% Chg Prev Qtr SAAR.....	2.45	2.33	1.16	1.41	1.83	1.71	1.77	1.75	1.99	2.10	2.04	1.74	1.48	1.68	1.87	1.66	1.91
% Chg Same Qtr Last Yr.....	1.34	3.19	1.13	1.83	1.68	1.52	1.68	1.76	1.80	1.90	1.97	1.97	1.84	1.68	1.87	1.66	1.91
FEDERAL, CIVILIAN.....	69308	75083	74394	74776	75173	75531	75900	76288	76667	77391	78101	78513	78794	70927	73390	75723	77668
% Chg Prev Qtr SAAR.....	10.15	37.73	-3.62	2.07	2.14	1.92	1.97	2.06	2.00	3.83	3.72	2.12	1.44	-0.23	3.47	3.18	2.57
% Chg Same Qtr Last Yr.....	-4.47	4.59	3.73	10.53	8.46	0.60	2.02	2.02	1.99	2.46	2.90	2.92	2.77	-0.23	3.47	3.18	2.57
STATE & LOCAL.....	38302	38168	38456	38626	38828	39021	39216	39411	39605	39799	39993	40186	40379	37573	38388	39119	39896
% Chg Prev Qtr SAAR.....	1.90	-1.40	3.06	1.77	2.11	2.00	2.02	2.00	1.99	1.97	1.96	1.95	1.94	2.09	2.17	1.90	1.99
% Chg Same Qtr Last Yr.....	2.52	3.57	1.33	1.32	1.37	2.24	1.98	2.03	2.00	1.99	1.98	1.97	1.96	2.09	2.17	1.90	1.99

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 15: Tennessee Civilian Labor Force and Unemployment Rate, Not Seasonally Adjusted**January 2014**

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
CIVILIAN LABOR FORCE (THOUS).....	3126	3124	3115	3081	3105	3129	3134	3107	3143	3173	3177	3145	3114	3116	3112	3150
% Chg Same Qtr Last Yr.....	0.30	0.08	-0.51	-0.61	-0.67	0.14	0.62	0.83	1.21	1.41	1.38	1.22	-0.11	0.09	-0.13	1.21
EMPLOYED PERSONS (THOUS).....	2864	2865	2867	2818	2867	2906	2917	2870	2920	2959	2969	2919	2864	2860	2877	2929
% Chg Same Qtr Last Yr.....	-0.06	-0.16	-1.06	-0.90	0.09	1.43	1.73	1.84	1.84	1.82	1.79	1.73	1.26	-0.14	0.59	1.82
UNEMPLOYED PERSONS (THOUS).....	262	259	248	263	238	223	217	237	223	214	209	225	249	256	235	221
% Chg Same Qtr Last Yr.....	4.46	2.82	6.29	2.64	-8.96	-14.08	-12.24	-10.00	-6.38	-3.96	-4.00	-4.89	-13.50	2.75	-8.14	-6.27
PARTICIPATION RATE (PERCENT).....	60.4	60.2	59.8	59.0	59.3	59.6	59.5	58.8	59.3	59.7	59.6	58.8	60.8	60.1	59.3	59.3
% Chg Same Qtr Last Yr.....	-0.87	-1.09	-1.67	-1.77	-1.84	-1.04	-0.57	-0.37	0.01	0.21	0.18	0.04	-1.30	-1.08	-1.31	0.01
UNEMPLOYMENT RATE (PERCENT).....	8.4	8.3	8.0	8.5	7.7	7.1	6.9	7.6	7.1	6.7	6.6	7.2	8.0	8.2	7.6	7.0

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 16: Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
CIVILIAN LABOR FORCE (THOUS).....	3128	3109	3106	3110	3108	3112	3124	3138	3145	3156	3167	3177	3113	3118	3114	3151
% Chg Prev Qtr SAAR.....	-0.20	-2.43	-0.35	0.51	-0.33	0.62	1.53	1.73	0.99	1.34	1.41	1.27	-0.09	0.15	-0.15	1.22
% Chg Same Qtr Last Yr.....	0.53	-0.02	-0.49	-0.62	-0.66	0.11	0.58	0.89	1.22	1.40	1.37	1.25	-0.09	0.15	-0.15	1.22
EMPLOYED PERSONS (THOUS).....	2870	2845	2850	2860	2873	2885	2899	2913	2925	2938	2951	2963	2864	2863	2879	2932
% Chg Prev Qtr SAAR.....	-2.22	-3.48	0.72	1.46	1.75	1.79	1.94	1.87	1.76	1.72	1.80	1.64	1.27	-0.06	0.58	1.82
% Chg Same Qtr Last Yr.....	0.40	-0.47	-1.06	-0.90	0.09	1.43	1.73	1.84	1.84	1.82	1.79	1.73	1.27	-0.06	0.58	1.82
UNEMPLOYED PERSONS (THOUS).....	258	264	256	250	235	227	225	225	220	218	216	214	249	256	234	220
% Chg Prev Qtr SAAR.....	26.16	9.76	-11.36	-9.57	-21.93	-12.94	-3.48	0.00	-8.60	-3.59	-3.62	-3.65	-13.53	2.56	-8.34	-6.19
% Chg Same Qtr Last Yr.....	2.02	5.08	6.29	2.64	-8.96	-14.08	-12.24	-10.00	-6.38	-3.96	-4.00	-4.89	-13.53	2.56	-8.34	-6.19
PARTICIPATION RATE (PERCENT).....	60.4	59.9	59.7	59.6	59.3	59.2	59.3	59.4	59.3	59.4	59.4	59.4	60.8	60.2	59.4	59.4
% Chg Prev Qtr SAAR.....	-1.37	-3.57	-1.51	-0.69	-1.51	-0.57	0.33	0.52	-0.21	0.15	0.22	0.11	-1.29	-1.02	-1.33	0.02
% Chg Same Qtr Last Yr.....	-0.65	-1.19	-1.65	-1.79	-1.83	-1.07	-0.61	-0.31	0.02	0.20	0.17	0.06	-1.29	-1.02	-1.33	0.02
UNEMPLOYMENT RATE (PERCENT).....	8.3	8.5	8.3	8.0	7.6	7.3	7.2	7.2	7.0	6.9	6.8	6.7	8.0	8.2	7.5	7.0

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 17: Tennessee Taxable Sales, Not Seasonally Adjusted (millions of 2009 dollars)

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL TAXABLE SALES.....	23949	23180	24891	22339	24366	23777	25480	22838	24908	24288	26006	23288	92441	93987	95962	98040
% Chg Same Qtr Last Yr.....	2.32	2.43	2.20	1.69	1.74	2.57	2.37	2.23	2.22	2.15	2.06	1.97	2.74	1.67	2.10	2.17
AUTO DEALERS.....	2318	2421	2171	2399	2483	2505	2253	2483	2564	2578	2317	2556	8754	9156	9641	9943
% Chg Same Qtr Last Yr.....	4.19	6.65	6.37	6.82	7.14	3.46	3.79	3.50	3.23	2.93	2.86	2.93	8.21	4.59	5.29	3.13
PURCHASES FROM MANUFACTURERS....	993	971	1028	818	993	994	1051	833	1008	1009	1066	847	3830	3800	3855	3915
% Chg Same Qtr Last Yr.....	1.82	4.47	-8.34	1.20	-0.02	2.35	2.23	1.83	1.51	1.49	1.44	1.67	-0.74	-0.78	1.46	1.55
MISC DURABLE GOODS.....	4197	3945	4031	3604	4300	4044	4125	3687	4397	4136	4217	3760	15421	15673	16074	16437
% Chg Same Qtr Last Yr.....	2.77	5.43	3.33	3.00	2.46	2.51	2.33	2.28	2.26	2.28	2.22	1.98	2.91	1.64	2.56	2.26
EATING AND DRINKING PLACES.....	2562	2488	2448	2421	2610	2576	2531	2502	2695	2657	2607	2572	9620	9855	10138	10461
% Chg Same Qtr Last Yr.....	4.00	2.68	2.43	2.69	1.88	3.54	3.41	3.32	3.26	3.15	3.02	2.83	5.31	2.44	2.87	3.19
FOOD STORES.....	2334	2296	2483	2211	2327	2341	2539	2254	2373	2381	2581	2293	9140	9370	9417	9589
% Chg Same Qtr Last Yr.....	3.50	0.76	0.83	-2.01	-0.31	1.94	2.23	1.97	1.97	1.73	1.66	1.73	3.19	2.51	0.50	1.83
LIQUOR STORES.....	184	188	234	187	197	192	240	191	202	197	247	196	748	784	816	837
% Chg Same Qtr Last Yr.....	0.83	7.58	6.87	4.92	6.99	2.31	2.49	2.42	2.59	2.67	2.71	2.66	6.83	4.83	4.06	2.60
HOTELS AND MOTELS.....	632	628	575	497	641	644	590	510	660	664	609	526	2345	2339	2371	2444
% Chg Same Qtr Last Yr.....	-1.03	0.06	-1.29	-1.41	1.40	2.54	2.54	2.71	3.03	3.17	3.28	3.15	4.49	-0.28	1.38	3.06
OTHER RETAIL AND SERVICE.....	7202	6899	8135	6811	7300	7076	8335	6958	7456	7224	8506	7089	28442	28955	29522	30143
% Chg Same Qtr Last Yr.....	1.72	1.56	3.36	1.37	1.37	2.57	2.46	2.16	2.12	2.10	2.05	1.89	3.01	1.80	1.96	2.10
MISC NONDURABLE GOODS.....	2002	1916	2334	1949	2061	1974	2371	1981	2099	2013	2416	2016	7943	8149	8355	8510
% Chg Same Qtr Last Yr.....	1.98	2.33	4.92	2.70	2.96	3.00	1.61	1.66	1.87	2.01	1.90	1.74	3.51	2.60	2.52	1.86
TRANSPORTATION, COMMUNICATION.....	1525	1429	1451	1442	1454	1432	1445	1439	1454	1427	1440	1432	6197	5906	5772	5760
% Chg Same Qtr Last Yr.....	-0.89	-5.98	-5.82	-3.95	-4.67	0.20	-0.44	-0.23	0.01	-0.30	-0.34	-0.46	-9.09	-4.68	-2.27	-0.21
PER CAPITA (\$)......	3674	3547	3798	3400	3699	3600	3848	3440	3742	3639	3886	3471	14313	14398	14546	14707
% Chg Same Qtr Last Yr.....	1.24	1.35	1.13	0.62	0.68	1.50	1.30	1.17	1.16	1.09	1.01	0.92	1.66	0.60	1.03	1.10

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 18: Tennessee Taxable Sales, Seasonally Adjusted (millions of 2009 dollars)

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL TAXABLE SALES.....	23504	23453	23640	23790	23909	24055	24204	24321	24438	24571	24707	24801	92504	93995	95958	98038
% Chg Prev Qtr SAAR.....	1.81	-0.86	3.23	2.57	2.00	2.48	2.49	1.95	1.94	2.19	2.23	1.53	2.82	1.61	2.09	2.17
% Chg Same Qtr Last Yr.....	2.29	2.53	2.20	1.68	1.72	2.57	2.39	2.23	2.22	2.14	2.08	1.97	2.82	1.61	2.09	2.17
AUTO DEALERS.....	2239	2344	2356	2379	2399	2425	2446	2462	2477	2496	2516	2534	8759	9166	9648	9950
% Chg Prev Qtr SAAR.....	2.24	20.00	2.23	3.81	3.48	4.33	3.53	2.68	2.40	3.13	3.22	2.97	8.07	4.65	5.26	3.13
% Chg Same Qtr Last Yr.....	4.42	6.85	6.37	6.82	7.14	3.46	3.79	3.50	3.23	2.93	2.86	2.93	8.07	4.65	5.26	3.13
PURCHASES FROM MANUFACTURERS....	961	944	950	956	961	966	971	973	975	980	985	990	3823	3799	3854	3914
% Chg Prev Qtr SAAR.....	7.16	-6.98	2.73	2.43	2.10	2.15	2.25	0.85	0.82	2.05	2.04	1.79	-0.84	-0.62	1.44	1.57
% Chg Same Qtr Last Yr.....	1.75	4.56	-8.34	1.20	-0.02	2.35	2.23	1.83	1.51	1.49	1.44	1.67	-0.84	-0.62	1.44	1.57
MISC DURABLE GOODS.....	3912	3930	3959	3988	4008	4029	4051	4079	4099	4121	4141	4160	15450	15673	16076	16439
% Chg Prev Qtr SAAR.....	4.22	1.87	2.99	2.92	2.05	2.10	2.25	2.75	1.95	2.15	2.01	1.82	3.18	1.44	2.57	2.26
% Chg Same Qtr Last Yr.....	2.72	5.65	3.33	3.00	2.46	2.51	2.33	2.28	2.26	2.28	2.22	1.98	3.18	1.44	2.57	2.26
EATING AND DRINKING PLACES.....	2478	2459	2482	2503	2525	2546	2567	2586	2607	2626	2645	2659	9623	9857	10140	10463
% Chg Prev Qtr SAAR.....	6.90	-3.10	3.92	3.32	3.53	3.38	3.39	2.96	3.32	2.94	2.86	2.20	5.34	2.43	2.88	3.19
% Chg Same Qtr Last Yr.....	3.85	2.90	2.43	2.69	1.88	3.54	3.41	3.32	3.26	3.15	3.02	2.83	5.34	2.43	2.88	3.19
FOOD STORES.....	2353	2315	2322	2337	2346	2360	2374	2383	2392	2400	2413	2425	9140	9375	9417	9589
% Chg Prev Qtr SAAR.....	-5.27	-6.39	1.30	2.62	1.50	2.34	2.44	1.60	1.52	1.38	2.14	1.89	3.21	2.58	0.44	1.83
% Chg Same Qtr Last Yr.....	3.48	0.89	0.83	-2.01	-0.31	1.94	2.23	1.97	1.97	1.73	1.66	1.73	3.21	2.58	0.44	1.83
LIQUOR STORES.....	190	200	201	202	203	205	206	207	209	210	211	213	748	783	816	837
% Chg Prev Qtr SAAR.....	-5.33	22.45	1.88	2.62	2.35	2.39	2.62	2.34	3.00	2.72	2.78	2.15	6.98	4.73	4.13	2.60
% Chg Same Qtr Last Yr.....	0.79	7.60	6.87	4.92	6.99	2.31	2.49	2.42	2.59	2.67	2.71	2.66	6.98	4.73	4.13	2.60
HOTELS AND MOTELS.....	582	580	583	587	591	594	598	603	609	613	618	622	2348	2341	2371	2443
% Chg Prev Qtr SAAR.....	-8.66	-1.95	2.69	2.72	2.19	2.57	2.68	3.40	3.48	3.12	3.12	2.87	4.78	-0.28	1.25	3.05
% Chg Same Qtr Last Yr.....	-1.09	0.25	-1.29	-1.41	1.39	2.54	2.54	2.71	3.03	3.17	3.28	3.15	4.78	-0.28	1.25	3.05
OTHER RETAIL AND SERVICE.....	7252	7213	7268	7317	7352	7398	7446	7475	7508	7553	7599	7616	28472	28951	29513	30134
% Chg Prev Qtr SAAR.....	1.93	-2.18	3.10	2.72	1.92	2.54	2.64	1.53	1.79	2.44	2.43	0.91	3.09	1.68	1.94	2.11
% Chg Same Qtr Last Yr.....	1.65	1.67	3.36	1.37	1.37	2.57	2.46	2.16	2.12	2.10	2.05	1.89	3.09	1.68	1.94	2.11
MISC NONDURABLE GOODS.....	2024	2029	2068	2077	2084	2090	2102	2111	2123	2132	2142	2148	7948	8144	8352	8508
% Chg Prev Qtr SAAR.....	0.31	1.10	7.94	1.64	1.31	1.27	2.21	1.85	2.15	1.83	1.77	1.22	3.55	2.46	2.56	1.86
% Chg Same Qtr Last Yr.....	1.93	2.35	4.92	2.70	2.96	3.00	1.61	1.66	1.87	2.01	1.90	1.74	3.55	2.46	2.56	1.86
TRANSPORTATION, COMMUNICATION.....	1512	1441	1449	1445	1441	1444	1443	1442	1441	1439	1438	1435	6194	5906	5772	5760
% Chg Prev Qtr SAAR.....	1.89	-17.42	2.30	-1.13	-1.12	0.78	-0.29	-0.26	-0.18	-0.46	-0.47	-0.75	-9.07	-4.65	-2.26	-0.21
% Chg Same Qtr Last Yr.....	-0.67	-6.08	-5.82	-3.95	-4.67	0.20	-0.44	-0.23	0.01	-0.30	-0.34	-0.46	-9.07	-4.65	-2.26	-0.21
PER CAPITA (\$).	3606	3588	3608	3621	3629	3642	3655	3663	3671	3681	3692	3697	14324	14401	14547	14708
% Chg Prev Qtr SAAR.....	0.74	-1.90	2.14	1.49	0.93	1.41	1.43	0.89	0.88	1.13	1.18	0.49	1.73	0.54	1.02	1.10
% Chg Same Qtr Last Yr.....	1.21	1.45	1.13	0.61	0.66	1.49	1.31	1.16	1.15	1.08	1.02	0.92	1.73	0.54	1.02	1.10

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 19: Tennessee Taxable Sales, Not Seasonally Adjusted (millions of current dollars) **January 2014**

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL TAXABLE SALES.....	25596	24894	26776	24111	26408	25867	27818	25033	27409	26840	28861	25972	98007	100751	104204	108143
% Chg Same Qtr Last Yr.....	3.41	3.59	3.12	2.67	3.17	3.91	3.89	3.82	3.79	3.76	3.75	3.75	4.62	2.80	3.43	3.78
AUTO DEALERS.....	2477	2600	2335	2590	2692	2725	2460	2722	2821	2849	2572	2851	9279	9814	10466	10964
% Chg Same Qtr Last Yr.....	5.30	7.85	7.32	7.84	8.65	4.81	5.33	5.11	4.81	4.56	4.56	4.72	10.19	5.76	6.64	4.76
PURCHASES FROM MANUFACTURERS....	1061	1043	1105	883	1076	1082	1147	913	1109	1115	1183	944	4062	4074	4187	4319
% Chg Same Qtr Last Yr.....	2.91	5.65	-7.52	2.17	1.39	3.68	3.75	3.42	3.07	3.09	3.12	3.45	1.08	0.30	2.78	3.16
MISC DURABLE GOODS.....	4485	4237	4337	3890	4660	4400	4504	4041	4838	4571	4680	4193	16348	16800	17454	18130
% Chg Same Qtr Last Yr.....	3.87	6.62	4.25	3.98	3.90	3.85	3.85	3.87	3.83	3.89	3.91	3.76	4.77	2.77	3.89	3.87
EATING AND DRINKING PLACES.....	2738	2672	2633	2613	2828	2802	2763	2742	2965	2936	2894	2869	10198	10563	11007	11538
% Chg Same Qtr Last Yr.....	5.11	3.84	3.35	3.68	3.31	4.89	4.94	4.92	4.84	4.78	4.72	4.62	7.24	3.58	4.20	4.82
FOOD STORES.....	2495	2466	2671	2386	2522	2546	2772	2471	2611	2631	2864	2558	9692	10044	10226	10578
% Chg Same Qtr Last Yr.....	4.60	1.90	1.73	-1.07	1.09	3.27	3.75	3.55	3.53	3.34	3.34	3.51	5.08	3.64	1.81	3.44
LIQUOR STORES.....	197	202	252	202	214	209	262	210	223	218	274	219	793	841	886	924
% Chg Same Qtr Last Yr.....	1.90	8.80	7.82	5.93	8.49	3.64	4.02	4.02	4.15	4.29	4.41	4.45	8.77	5.98	5.41	4.23
HOTELS AND MOTELS.....	676	674	619	536	695	700	644	559	727	734	676	587	2486	2507	2575	2696
% Chg Same Qtr Last Yr.....	0.02	1.19	-0.40	-0.46	2.82	3.88	4.06	4.30	4.61	4.80	4.99	4.95	6.36	0.82	2.71	4.69
OTHER RETAIL AND SERVICE.....	7697	7409	8751	7351	7912	7698	9100	7626	8204	7984	9440	7906	30158	31040	32061	33254
% Chg Same Qtr Last Yr.....	2.80	2.70	4.29	2.34	2.79	3.91	3.98	3.75	3.69	3.71	3.74	3.67	4.89	2.93	3.29	3.72
MISC NONDURABLE GOODS.....	2139	2058	2511	2103	2234	2147	2589	2172	2310	2225	2682	2248	8422	8737	9073	9388
% Chg Same Qtr Last Yr.....	3.06	3.48	5.86	3.69	4.40	4.34	3.12	3.24	3.43	3.62	3.59	3.52	5.40	3.73	3.85	3.48
TRANSPORTATION, COMMUNICATION.....	1630	1534	1561	1557	1575	1557	1578	1577	1600	1577	1598	1597	6569	6331	6267	6352
% Chg Same Qtr Last Yr.....	0.17	-4.92	-4.98	-3.03	-3.33	1.50	1.04	1.33	1.54	1.27	1.31	1.27	-7.41	-3.62	-1.00	1.36
PER CAPITA (\$).	3927	3809	4086	3670	4009	3916	4201	3770	4117	4022	4313	3871	15174	15434	15796	16222
% Chg Same Qtr Last Yr.....	2.32	2.49	2.03	1.59	2.09	2.82	2.80	2.74	2.71	2.69	2.68	2.68	3.51	1.71	2.34	2.70

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 20: Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)

January 2014

	History		Forecast Data										Annual			
	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2016:1	2012	2013	2014	2015
TOTAL TAXABLE SALES.....	25120	25186	25431	25678	25912	26170	26425	26659	26892	27153	27420	27659	98060	100752	104185	108123
% Chg Prev Qtr SAAR.....	1.69	1.06	3.94	3.94	3.70	4.04	3.95	3.59	3.54	3.94	4.00	3.53	4.71	2.75	3.41	3.78
% Chg Same Qtr Last Yr.....	3.38	3.69	3.12	2.65	3.15	3.90	3.91	3.82	3.78	3.76	3.77	3.75	4.71	2.75	3.41	3.78
AUTO DEALERS.....	2393	2517	2535	2567	2600	2638	2670	2699	2725	2758	2792	2826	9285	9825	10475	10973
% Chg Prev Qtr SAAR.....	2.12	22.32	2.93	5.20	5.20	5.92	5.00	4.33	4.00	4.90	5.00	5.00	10.05	5.82	6.61	4.76
% Chg Same Qtr Last Yr.....	5.54	8.06	7.32	7.84	8.65	4.81	5.33	5.11	4.81	4.56	4.56	4.72	10.05	5.82	6.61	4.76
PURCHASES FROM MANUFACTURERS....	1027	1014	1022	1032	1041	1051	1060	1067	1073	1083	1093	1104	4053	4072	4184	4317
% Chg Prev Qtr SAAR.....	7.04	-5.18	3.44	3.80	3.80	3.70	3.70	2.47	2.40	3.80	3.80	3.80	1.00	0.47	2.75	3.17
% Chg Same Qtr Last Yr.....	2.83	5.74	-7.52	2.17	1.39	3.68	3.75	3.42	3.07	3.09	3.12	3.45	1.00	0.47	2.75	3.17
MISC DURABLE GOODS.....	4181	4221	4259	4304	4344	4383	4423	4471	4510	4554	4596	4639	16377	16800	17454	18130
% Chg Prev Qtr SAAR.....	4.10	3.84	3.70	4.30	3.75	3.65	3.70	4.40	3.55	3.91	3.77	3.83	5.06	2.58	3.89	3.87
% Chg Same Qtr Last Yr.....	3.82	6.84	4.25	3.98	3.90	3.85	3.85	3.87	3.83	3.89	3.91	3.76	5.06	2.58	3.89	3.87
EATING AND DRINKING PLACES.....	2649	2640	2671	2701	2736	2769	2803	2834	2869	2902	2935	2965	10201	10565	11010	11540
% Chg Prev Qtr SAAR.....	6.77	-1.22	4.63	4.70	5.26	4.95	4.86	4.62	4.94	4.71	4.63	4.22	7.28	3.57	4.21	4.82
% Chg Same Qtr Last Yr.....	4.96	4.06	3.35	3.68	3.31	4.89	4.94	4.92	4.84	4.78	4.72	4.62	7.28	3.57	4.21	4.82
FOOD STORES.....	2515	2486	2498	2523	2543	2567	2592	2612	2632	2653	2678	2704	9689	10049	10224	10576
% Chg Prev Qtr SAAR.....	-5.38	-4.58	2.00	4.00	3.19	3.90	3.90	3.23	3.11	3.12	3.90	3.90	5.11	3.71	1.74	3.44
% Chg Same Qtr Last Yr.....	4.58	2.03	1.73	-1.07	1.09	3.27	3.75	3.55	3.53	3.34	3.34	3.51	5.11	3.71	1.74	3.44
LIQUOR STORES.....	203	215	216	218	220	222	225	227	229	232	235	237	793	840	886	923
% Chg Prev Qtr SAAR.....	-5.44	24.82	2.58	4.00	4.05	3.95	4.08	3.99	4.61	4.49	4.55	4.16	8.94	5.91	5.47	4.22
% Chg Same Qtr Last Yr.....	1.86	8.82	7.82	5.93	8.49	3.64	4.02	4.02	4.15	4.29	4.41	4.45	8.94	5.91	5.47	4.22
HOTELS AND MOTELS.....	623	622	628	634	640	647	653	661	670	678	686	694	2489	2510	2574	2694
% Chg Prev Qtr SAAR.....	-8.76	-0.05	3.40	4.10	3.89	4.13	4.14	5.06	5.10	4.89	4.90	4.90	6.69	0.83	2.56	4.68
% Chg Same Qtr Last Yr.....	-0.03	1.38	-0.40	-0.46	2.82	3.88	4.06	4.30	4.61	4.80	4.99	4.95	6.69	0.83	2.56	4.68
OTHER RETAIL AND SERVICE.....	7751	7746	7818	7897	7968	8048	8129	8193	8261	8347	8433	8494	30182	31032	32043	33234
% Chg Prev Qtr SAAR.....	1.81	-0.29	3.80	4.10	3.62	4.10	4.10	3.16	3.38	4.20	4.20	2.90	4.99	2.82	3.26	3.72
% Chg Same Qtr Last Yr.....	2.73	2.81	4.29	2.34	2.79	3.91	3.98	3.75	3.69	3.71	3.74	3.67	4.99	2.82	3.26	3.72
MISC NONDURABLE GOODS.....	2163	2179	2225	2242	2258	2274	2294	2314	2336	2356	2377	2396	8425	8729	9068	9383
% Chg Prev Qtr SAAR.....	0.19	3.05	8.68	3.00	3.00	2.81	3.66	3.49	3.75	3.58	3.53	3.22	5.45	3.61	3.88	3.47
% Chg Same Qtr Last Yr.....	3.01	3.51	5.86	3.69	4.40	4.34	3.12	3.24	3.43	3.62	3.59	3.52	5.45	3.61	3.88	3.47
TRANSPORTATION, COMMUNICATION.....	1616	1547	1559	1560	1562	1571	1575	1580	1586	1591	1596	1600	6566	6330	6267	6352
% Chg Prev Qtr SAAR.....	1.77	-15.82	3.00	0.20	0.53	2.31	1.13	1.34	1.38	1.25	1.25	1.21	-7.39	-3.59	-1.00	1.36
% Chg Same Qtr Last Yr.....	0.39	-5.02	-4.98	-3.03	-3.33	1.50	1.04	1.33	1.54	1.27	1.31	1.27	-7.39	-3.59	-1.00	1.36
PER CAPITA (\$).	3854	3854	3881	3908	3934	3962	3990	4015	4040	4068	4098	4123	15184	15436	15794	16221
% Chg Prev Qtr SAAR.....	0.62	0.00	2.85	2.85	2.61	2.95	2.87	2.52	2.46	2.87	2.92	2.47	3.60	1.66	2.32	2.70
% Chg Same Qtr Last Yr.....	2.29	2.59	2.03	1.57	2.07	2.82	2.82	2.74	2.70	2.68	2.69	2.68	3.60	1.66	2.32	2.70

Center for Business and Economic Research, University of Tennessee

Table 1: Selected U.S. and Tennessee Economic Indicators

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
US GDP (Bil2009\$).....	15761.3	16182.8	16708.5	17273.6	17822.7	18327.7	18815.3	19286.6	19738.2	20185.4	20642.4
Percentage change.....	1.88	2.67	3.25	3.38	3.18	2.83	2.66	2.51	2.34	2.27	2.26
US GDP (Bil\$).....	16792.3	17507.9	18375.4	19316.0	20261.2	21191.8	22107.9	23048.3	24000.1	24964.5	25968.8
Percentage change.....	3.37	4.26	4.96	5.12	4.89	4.59	4.32	4.25	4.13	4.02	4.02
TN PERSONAL INCOME (MIL2009\$).....	239587	246464	253465	260092	267429	274329	281886	289325	296519	303892	311538
Percentage change.....	1.52	2.87	2.84	2.61	2.82	2.58	2.75	2.64	2.49	2.49	2.52
US PERSONAL INCOME (BIL2009\$).....	13190	13640	14125	14640	15183	15666	16125	16547	16943	17357	17788
Percentage change.....	1.74	3.41	3.55	3.65	3.71	3.18	2.93	2.62	2.39	2.44	2.48
TN PERSONAL INCOME (MIL\$).....	256814	267595	279543	291950	305547	319285	333858	348905	364181	379926	396388
Percentage change.....	2.65	4.20	4.46	4.44	4.66	4.50	4.56	4.51	4.38	4.32	4.33
US PERSONAL INCOME (BIL\$).....	14138	14786	15527	16356	17253	18126	18979	19827	20674	21557	22486
Percentage change.....	2.87	4.58	5.02	5.34	5.48	5.06	4.70	4.47	4.27	4.27	4.31
TN NONFARM JOBS (THOUS).....	2755.3	2795.2	2846.4	2895.6	2941.0	2976.8	3004.3	3029.9	3059.6	3088.2	3117.7
Percentage change.....	1.49	1.45	1.83	1.73	1.57	1.22	0.92	0.85	0.98	0.94	0.95
US NONFARM JOBS (MIL).....	135.9	138.3	141.0	143.9	146.4	148.1	149.3	150.3	150.8	151.5	152.1
Percentage change.....	1.64	1.71	1.99	2.04	1.73	1.18	0.79	0.67	0.34	0.45	0.45
TN MFG JOBS (THOUS).....	320.3	323.6	325.1	326.0	325.8	325.3	324.1	321.7	319.1	316.1	313.3
Percentage change.....	2.19	1.02	0.48	0.27	-0.07	-0.14	-0.38	-0.73	-0.81	-0.94	-0.88
US MFG JOBS (MIL).....	12.0	12.3	12.6	12.7	12.8	12.8	12.8	12.8	12.7	12.6	12.6
Percentage change.....	0.51	2.56	2.25	1.34	0.47	0.27	0.08	-0.35	-0.55	-0.74	-0.45
TN UNEMPLOYMENT RATE (%).....	8.2	7.5	7.0	6.5	6.3	6.2	6.2	6.0	5.8	5.6	5.5
US UNEMPLOYMENT RATE (%).....	7.4	6.5	5.9	5.4	5.1	5.0	5.0	4.9	5.0	5.1	5.1
CHAINED PRICE INDEX, GDP (2009=100.0).....	106.5	108.2	110.0	111.8	113.7	115.6	117.5	119.5	121.6	123.7	125.8
Percentage change.....	1.39	1.62	1.65	1.68	1.66	1.71	1.62	1.71	1.75	1.71	1.72
US PERS CONSUMP DEFL (2009=100.0).....	107.2	108.4	109.9	111.7	113.6	115.7	117.7	119.8	122.0	124.2	126.4
Percentage change.....	1.11	1.13	1.41	1.63	1.71	1.82	1.73	1.81	1.84	1.78	1.78
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000)....	2.330	2.363	2.404	2.449	2.495	2.546	2.594	2.645	2.699	2.751	2.803
Percentage change.....	1.46	1.44	1.75	1.83	1.91	2.04	1.87	1.97	2.05	1.92	1.91
BANK PRIME INTEREST RATE (%).....	3.3	3.3	3.4	5.2	6.8	7.0	7.0	7.0	7.0	7.0	7.0
FEDERAL FUNDS RATE (% per annum).....	0.107	0.090	0.353	2.155	3.829	4.000	4.000	4.000	4.000	4.000	4.000
30-YEAR FIXED MORTGAGE RATE (%).....	4.0	4.6	5.0	5.8	6.5	6.6	6.6	6.6	6.6	6.6	6.6
TN TAXABLE SALES (MIL2009\$).....	93995	95958	98038	99939	102104	104325	106680	108959	111299	113808	116397
Percentage change.....	1.61	2.09	2.17	1.94	2.17	2.18	2.26	2.14	2.15	2.25	2.28
TN TAXABLE SALES (MIL\$).....	100752	104185	108123	112179	116657	121421	126348	131396	136696	142282	148098
Percentage change.....	2.75	3.41	3.78	3.75	3.99	4.08	4.06	4.00	4.03	4.09	4.09
TN AVG ANNUAL WAGE, NONFARM (2009\$).....	42146	42657	43074	43358	43622	43834	44091	44329	44510	44710	44896
Percentage change.....	0.29	1.21	0.98	0.66	0.61	0.49	0.59	0.54	0.41	0.45	0.42
TN AVG ANNUAL WAGE, NONFARM (\$).....	45176	46313	47504	48667	49838	51016	52219	53456	54665	55895	57122
Percentage change.....	1.41	2.52	2.57	2.45	2.41	2.36	2.36	2.37	2.26	2.25	2.20

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
US GDP (2009\$).....	49719	50656	51900	53244	54516	55634	56681	57663	58571	59455	60356
Percentage change.....	1.10	1.89	2.46	2.59	2.39	2.05	1.88	1.73	1.58	1.51	1.52
US GDP (\$).....	52971	54804	57078	59539	61975	64328	66600	68909	71218	73532	75930
Percentage change.....	2.58	3.46	4.15	4.31	4.09	3.80	3.53	3.47	3.35	3.25	3.26
TN PERSONAL INCOME (2009\$).....	36706	37364	38026	38619	39306	39918	40614	41281	41902	42538	43202
Percentage change.....	0.45	1.79	1.77	1.56	1.78	1.56	1.74	1.64	1.50	1.52	1.56
US PERSONAL INCOME (2009\$).....	41609	42696	43874	45127	46443	47555	48577	49472	50276	51123	52009
Percentage change.....	0.97	2.61	2.76	2.86	2.92	2.39	2.15	1.84	1.63	1.68	1.73
TN PERSONAL INCOME (\$).....	39345	40567	41938	43349	44908	46459	48101	49781	51463	53180	54968
Percentage change.....	1.56	3.10	3.38	3.37	3.60	3.45	3.53	3.49	3.38	3.34	3.36
US PERSONAL INCOME (\$).....	44599	46283	48231	50415	52773	55021	57172	59279	61348	63495	65747
Percentage change.....	2.08	3.78	4.21	4.53	4.68	4.26	3.91	3.68	3.49	3.50	3.55
TN TAXABLE SALES (2009\$).....	14401	14547	14708	14839	15007	15181	15370	15546	15728	15930	16141
Percentage change.....	0.54	1.02	1.10	0.89	1.13	1.15	1.25	1.14	1.17	1.29	1.32
TN TAXABLE SALES (\$).....	15436	15794	16221	16656	17146	17668	18204	18747	19317	19916	20537
Percentage change.....	1.66	2.32	2.70	2.68	2.94	3.04	3.03	2.99	3.04	3.10	3.12

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 3: Tennessee Personal Income Components (millions of 2009 dollars)**January 2014**

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TN PERSONAL INCOME.....	239587	246464	253465	260092	267429	274329	281886	289325	296519	303892	311538
Percentage change.....	1.52	2.87	2.84	2.61	2.82	2.58	2.75	2.64	2.49	2.49	2.52
WAGES AND SALARIES.....	116976	120080	123438	126364	129096	131274	133240	135076	136935	138815	140704
Percentage change.....	1.77	2.65	2.80	2.37	2.16	1.69	1.50	1.38	1.38	1.37	1.36
OTHER LABOR INCOME.....	28002	28365	28837	29518	30210	30872	31570	32151	32644	33114	33651
Percentage change.....	1.95	1.30	1.66	2.36	2.34	2.19	2.26	1.84	1.53	1.44	1.62
PROPRIETORS INCOME.....	31067	32271	33697	35066	36632	37770	39156	40430	41669	43072	44541
Percentage change.....	4.37	3.88	4.42	4.06	4.46	3.11	3.67	3.25	3.06	3.37	3.41
RENT, INTEREST, DIVIDENDS.....	33702	35087	36331	37511	38671	40053	41623	43285	44780	46149	47592
Percentage change.....	2.94	4.11	3.54	3.25	3.09	3.58	3.92	3.99	3.45	3.06	3.13
TRANSFER PAYMENTS.....	50059	51257	52067	52776	54065	55698	57774	59992	62215	64603	67040
Percentage change.....	2.61	2.39	1.58	1.36	2.44	3.02	3.73	3.84	3.71	3.84	3.77
LESS: PERS CONT FOR SOC INS.....	18767	19128	19430	19668	19766	19859	19998	20129	20247	20383	20511
Percentage change.....	15.21	1.92	1.58	1.22	0.50	0.47	0.70	0.66	0.58	0.68	0.63
RESIDENCE ADJUSTMENT.....	-1451	-1468	-1474	-1477	-1478	-1479	-1480	-1480	-1479	-1478	-1478
Percentage change.....	2.66	1.14	0.41	0.18	0.13	0.02	0.09	-0.01	-0.06	-0.04	-0.05
PER CAPITA PERSONAL INCOME (\$).	36706	37364	38026	38619	39306	39918	40614	41281	41902	42538	43202
Percentage change.....	0.45	1.79	1.77	1.56	1.78	1.56	1.74	1.64	1.50	1.52	1.56

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 4: Tennessee Personal Income Components (millions of current dollars)

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TN PERSONAL INCOME.....	256814	267595	279543	291950	305547	319285	333858	348905	364181	379926	396388
Percentage change.....	2.65	4.20	4.46	4.44	4.66	4.50	4.56	4.51	4.38	4.32	4.33
WAGES AND SALARIES.....	125386	130375	136137	141841	147495	152785	157803	162889	168180	173544	179023
Percentage change.....	2.90	3.98	4.42	4.19	3.99	3.59	3.28	3.22	3.25	3.19	3.16
OTHER LABOR INCOME.....	30015	30796	31803	33134	34515	35930	37390	38771	40093	41399	42815
Percentage change.....	3.08	2.60	3.27	4.18	4.17	4.10	4.06	3.69	3.41	3.26	3.42
PROPRIETORS INCOME.....	33301	35038	37164	39363	41854	43960	46376	48756	51178	53850	56672
Percentage change.....	5.54	5.22	6.07	5.91	6.33	5.03	5.50	5.13	4.97	5.22	5.24
RENT, INTEREST, DIVIDENDS.....	36126	38095	40069	42106	44183	46618	49298	52200	54999	57696	60554
Percentage change.....	4.08	5.45	5.18	5.08	4.93	5.51	5.75	5.89	5.36	4.90	4.95
TRANSFER PAYMENTS.....	53658	55651	57423	59239	61772	64826	68427	72347	76413	80768	85300
Percentage change.....	3.75	3.71	3.18	3.16	4.27	4.94	5.56	5.73	5.62	5.70	5.61
LESS: PERS CONT FOR SOC INS.....	20116	20768	21428	22076	22583	23113	23684	24274	24866	25483	26097
Percentage change.....	16.49	3.24	3.18	3.02	2.29	2.35	2.47	2.49	2.44	2.48	2.41
RESIDENCE ADJUSTMENT.....	-1556	-1594	-1625	-1657	-1689	-1721	-1753	-1785	-1816	-1848	-1880
Percentage change.....	3.78	2.44	2.00	1.96	1.92	1.88	1.85	1.81	1.78	1.75	1.72
PER CAPITA PERSONAL INCOME (\$)......	39345	40567	41938	43349	44908	46459	48101	49781	51463	53180	54968
Percentage change.....	1.56	3.10	3.38	3.37	3.60	3.45	3.53	3.49	3.38	3.34	3.36

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 5: Tennessee Nonfarm Employment by Sector (thousands of jobs)

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL NONFARM.....	2755.3	2795.2	2846.4	2895.6	2941.0	2976.8	3004.3	3029.9	3059.6	3088.2	3117.7
Percentage change.....	1.49	1.45	1.83	1.73	1.57	1.22	0.92	0.85	0.98	0.94	0.95
NATURAL RESOURCES, MINING & CONSTRUCTION....	108.5	110.5	114.1	118.0	120.7	122.9	124.4	125.5	126.2	126.9	127.9
Percentage change.....	-0.84	1.89	3.26	3.37	2.30	1.86	1.16	0.89	0.56	0.56	0.84
MANUFACTURING.....	320.3	323.6	325.1	326.0	325.8	325.3	324.1	321.7	319.1	316.1	313.3
Percentage change.....	2.19	1.02	0.48	0.27	-0.07	-0.14	-0.38	-0.73	-0.81	-0.94	-0.88
DURABLE GOODS.....	200.4	204.0	206.9	209.1	210.6	211.4	211.2	210.4	209.3	207.9	206.6
Percentage change.....	3.26	1.82	1.39	1.06	0.71	0.42	-0.09	-0.42	-0.50	-0.67	-0.61
NONDURABLE GOODS.....	120.0	119.6	118.3	116.9	115.2	113.9	112.8	111.4	109.8	108.2	106.7
Percentage change.....	0.46	-0.33	-1.09	-1.12	-1.47	-1.15	-0.93	-1.30	-1.40	-1.46	-1.39
TRADE, TRANSPORTATION, UTILITIES.....	583.4	590.0	596.1	604.4	613.1	618.0	620.0	619.6	622.0	623.8	625.4
Percentage change.....	1.41	1.14	1.04	1.39	1.43	0.80	0.33	-0.07	0.39	0.29	0.26
WHOLESALE TRADE.....	119.3	119.9	121.4	123.7	126.1	127.6	128.3	128.4	128.4	128.2	127.9
Percentage change.....	-1.19	0.52	1.26	1.89	1.96	1.21	0.50	0.06	0.00	-0.14	-0.20
RETAIL TRADE.....	322.0	326.4	327.6	329.6	332.4	333.4	333.4	332.1	333.1	333.8	334.6
Percentage change.....	2.71	1.36	0.38	0.61	0.84	0.33	-0.01	-0.39	0.30	0.20	0.24
TRANSPORTATION & UTILITIES.....	142.1	143.7	147.1	151.1	154.6	156.9	158.3	159.1	160.5	161.8	162.9
Percentage change.....	0.75	1.16	2.34	2.73	2.30	1.50	0.89	0.50	0.90	0.80	0.66
INFORMATION.....	42.1	42.7	42.9	43.3	43.9	44.2	44.7	45.3	45.9	46.5	47.1
Percentage change.....	-2.09	1.35	0.44	1.02	1.20	0.80	1.20	1.23	1.25	1.36	1.42
FINANCIAL ACTIVITIES.....	139.6	140.7	141.7	142.0	141.9	141.6	141.2	140.9	140.7	140.6	140.5
Percentage change.....	1.48	0.77	0.77	0.16	-0.05	-0.24	-0.26	-0.18	-0.14	-0.11	-0.06
PROFESSIONAL & BUSINESS SERVICES.....	348.6	357.2	373.9	387.7	400.6	410.6	419.9	432.5	446.3	459.7	473.7
Percentage change.....	3.55	2.47	4.67	3.69	3.33	2.50	2.25	3.00	3.20	3.00	3.05
EDUCATION & HEALTH SERVICES.....	401.5	409.4	418.4	428.5	438.8	449.1	459.2	468.9	478.6	488.5	498.5
Percentage change.....	1.89	1.97	2.20	2.40	2.40	2.36	2.24	2.11	2.08	2.06	2.05
LEISURE & HOSPITALITY.....	289.0	297.8	306.4	314.6	320.9	324.3	326.3	327.3	328.6	329.6	330.5
Percentage change.....	4.26	3.06	2.88	2.66	2.02	1.06	0.62	0.30	0.40	0.30	0.27
OTHER SERVICES.....	104.8	105.2	105.6	105.6	105.9	106.4	105.6	105.0	104.6	104.4	103.9
Percentage change.....	0.59	0.35	0.43	0.01	0.26	0.46	-0.75	-0.57	-0.36	-0.27	-0.40
GOVERNMENT.....	417.5	418.0	422.0	425.5	429.5	434.3	438.9	443.3	447.5	452.3	456.8
Percentage change.....	-1.57	0.13	0.95	0.82	0.94	1.12	1.06	0.99	0.96	1.05	1.00
FEDERAL, CIVILIAN.....	46.8	44.3	43.9	42.9	42.3	41.6	41.0	40.4	39.8	39.4	39.1
Percentage change.....	-7.00	-5.23	-1.03	-2.15	-1.53	-1.63	-1.34	-1.50	-1.50	-0.94	-0.81
STATE & LOCAL.....	370.7	373.7	378.1	382.5	387.2	392.7	397.9	402.9	407.7	412.8	417.7
Percentage change.....	-0.84	0.80	1.19	1.17	1.22	1.42	1.32	1.25	1.21	1.25	1.17

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 6: Tennessee Durable Goods Manufacturing Employment (thousands of jobs)**January 2014**

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL DURABLE GOODS.....	200.4	204.0	206.9	209.1	210.6	211.4	211.2	210.4	209.3	207.9	206.6
Percentage change.....	3.26	1.82	1.39	1.06	0.71	0.42	-0.09	-0.42	-0.50	-0.67	-0.61
WOOD PRODUCTS.....	10.8	10.8	10.8	10.9	10.9	10.9	10.8	10.7	10.7	10.7	10.6
Percentage change.....	-2.45	-0.33	0.57	0.61	0.50	-0.50	-0.89	-0.31	-0.33	-0.40	-0.38
NONMETALLIC MINERALS.....	12.7	12.8	13.1	13.3	13.4	13.5	13.5	13.4	13.4	13.3	13.2
Percentage change.....	1.80	0.58	2.37	1.92	0.80	0.50	-0.01	-0.44	-0.50	-0.48	-0.55
PRIMARY METALS.....	10.2	10.4	10.7	10.9	11.3	11.4	11.5	11.4	11.3	11.2	11.2
Percentage change.....	5.79	1.82	2.12	2.30	3.34	1.50	0.34	-0.42	-0.90	-0.93	-0.55
FABRICATED METALS.....	33.8	34.1	34.4	34.8	34.4	34.3	34.2	34.1	33.9	33.8	33.7
Percentage change.....	-1.65	0.83	1.01	0.90	-0.98	-0.23	-0.39	-0.43	-0.36	-0.51	-0.11
MACHINERY.....	25.4	26.2	26.8	27.3	27.8	28.1	28.3	28.5	28.7	28.5	28.4
Percentage change.....	-0.27	3.15	2.34	1.70	2.00	1.20	0.70	0.71	0.40	-0.40	-0.50
COMPUTERS & ELECTRONICS.....	5.8	5.7	5.5	5.4	5.2	5.1	5.0	4.8	4.7	4.7	4.6
Percentage change.....	0.49	-3.16	-2.41	-2.56	-3.00	-2.33	-2.80	-2.23	-1.96	-2.04	-2.00
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	18.4	18.8	19.0	19.2	19.3	19.4	19.4	19.4	19.4	19.3	19.1
Percentage change.....	2.88	2.05	1.29	0.95	0.47	0.70	-0.26	0.02	0.07	-0.80	-0.90
TRANSPORTATION EQUIPMENT.....	59.1	61.0	62.2	63.1	64.1	64.7	65.1	64.7	64.2	63.8	63.4
Percentage change.....	10.30	3.23	2.00	1.36	1.59	1.00	0.50	-0.50	-0.78	-0.62	-0.70
FURNITURE.....	8.9	9.0	9.0	9.0	8.8	8.6	8.4	8.2	8.0	7.9	7.7
Percentage change.....	1.78	1.03	0.17	-0.32	-2.31	-2.08	-2.23	-2.66	-2.00	-2.00	-2.00
MISCELLANEOUS DURABLES.....	15.2	15.3	15.3	15.3	15.3	15.3	15.2	15.0	14.9	14.8	14.8
Percentage change.....	1.45	0.99	-0.28	0.05	0.26	-0.18	-0.83	-1.01	-0.53	-0.59	-0.33

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 7: Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs)

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL NONDURABLE GOODS.....	119.97	119.57	118.27	116.95	115.23	113.90	112.84	111.37	109.81	108.21	106.71
Percentage change.....	0.46	-0.33	-1.09	-1.12	-1.47	-1.15	-0.93	-1.30	-1.40	-1.46	-1.39
FOOD.....	33.31	33.56	33.60	33.64	33.37	33.21	33.10	32.88	32.65	32.52	32.38
Percentage change.....	0.17	0.74	0.13	0.11	-0.80	-0.48	-0.34	-0.66	-0.70	-0.39	-0.45
BEVERAGE & TOBACCO.....	5.33	5.42	5.39	5.32	5.27	5.23	5.19	5.15	5.10	5.06	5.02
Percentage change.....	2.65	1.66	-0.56	-1.24	-0.99	-0.72	-0.76	-0.79	-0.85	-0.95	-0.67
TEXTILE MILLS, TEXTILE MILL PRODUCTS & APPAREL.....	10.69	10.63	10.42	10.19	9.84	9.50	9.19	8.83	8.51	8.18	7.94
Percentage change.....	-0.59	-0.57	-1.94	-2.22	-3.42	-3.46	-3.25	-3.98	-3.63	-3.78	-3.03
PAPER.....	14.19	13.91	13.54	13.21	12.94	12.77	12.66	12.57	12.51	12.49	12.45
Percentage change.....	-3.33	-2.00	-2.64	-2.49	-2.00	-1.33	-0.85	-0.68	-0.50	-0.14	-0.31
PRINTING & RELATED SUPPORT.....	8.80	8.30	7.80	7.30	6.85	6.52	6.30	6.12	5.95	5.79	5.62
Percentage change.....	-7.28	-5.75	-5.91	-6.41	-6.17	-4.87	-3.37	-2.81	-2.82	-2.76	-2.88
CHEMICALS.....	24.21	23.93	23.52	23.22	22.89	22.57	22.28	21.83	21.32	20.81	20.33
Percentage change.....	-0.50	-1.18	-1.68	-1.30	-1.40	-1.40	-1.32	-2.01	-2.33	-2.37	-2.32
PLASTICS & RUBBER.....	20.00	20.01	20.22	20.36	20.46	20.61	20.74	20.71	20.58	20.27	19.97
Percentage change.....	0.27	0.04	1.06	0.71	0.50	0.70	0.64	-0.13	-0.62	-1.54	-1.45
MISCELLANEOUS NONDURABLE GOODS.....	3.43	3.83	3.77	3.71	3.60	3.49	3.39	3.28	3.18	3.09	3.00
Percentage change.....	94.71	11.57	-1.53	-1.56	-3.00	-2.99	-3.04	-3.04	-2.98	-3.02	-2.98

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 8: Tennessee Average Annual Wage and Salary Rate by Sector (2009 dollars)

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL NONFARM.....	42146	42657	43074	43358	43622	43834	44091	44329	44510	44710	44896
Percentage change.....	0.29	1.21	0.98	0.66	0.61	0.49	0.59	0.54	0.41	0.45	0.42
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	45599	46220	46976	47240	47451	47599	47777	47906	48003	48106	48200
Percentage change.....	-0.71	1.36	1.63	0.56	0.45	0.31	0.37	0.27	0.20	0.21	0.20
MANUFACTURING.....	51689	52336	52728	53040	53382	53621	53990	54353	54542	54837	55024
Percentage change.....	-0.07	1.25	0.75	0.59	0.65	0.45	0.69	0.67	0.35	0.54	0.34
DURABLE GOODS.....	50080	50854	51267	51561	51902	52107	52486	52888	53047	53364	53526
Percentage change.....	-2.38	1.55	0.81	0.57	0.66	0.40	0.73	0.77	0.30	0.60	0.30
NONDURABLE GOODS.....	54375	54863	55284	55684	56088	56431	56807	57121	57393	57666	57923
Percentage change.....	3.74	0.90	0.77	0.72	0.73	0.61	0.67	0.55	0.48	0.48	0.45
TRADE, TRANSPORTATION, UTILITIES.....	38618	39066	39465	39773	40026	40204	40379	40508	40564	40622	40662
Percentage change.....	-0.49	1.16	1.02	0.78	0.63	0.45	0.44	0.32	0.14	0.14	0.10
WHOLESALE TRADE.....	59887	60856	61551	62090	62589	63003	63447	63821	64145	64471	64778
Percentage change.....	1.93	1.62	1.14	0.88	0.80	0.66	0.71	0.59	0.51	0.51	0.48
RETAIL TRADE.....	26022	26284	26437	26512	26561	26569	26587	26575	26543	26514	26479
Percentage change.....	-2.59	1.01	0.58	0.28	0.19	0.03	0.07	-0.05	-0.12	-0.11	-0.13
TRANSPORTATION & UTILITIES.....	49309	49917	50252	50428	50564	50633	50733	50784	50804	50833	50855
Percentage change.....	1.42	1.23	0.67	0.35	0.27	0.14	0.20	0.10	0.04	0.06	0.04
INFORMATION.....	56744	57034	57381	57694	58035	58336	58691	58995	59262	59537	59798
Percentage change.....	2.38	0.51	0.61	0.54	0.59	0.52	0.61	0.52	0.45	0.46	0.44
FINANCIAL ACTIVITIES.....	62573	63928	64804	65473	66087	66605	67152	67622	68035	68447	68838
Percentage change.....	-1.15	2.17	1.37	1.03	0.94	0.78	0.82	0.70	0.61	0.61	0.57
PROFESSIONAL & BUSINESS SERVICES..	49993	51206	52177	53017	53819	54544	55292	55975	56609	57240	57848
Percentage change.....	2.12	2.43	1.90	1.61	1.51	1.35	1.37	1.23	1.13	1.11	1.06
EDUCATION & HEALTH SERVICES.....	43878	44401	44786	45052	45282	45448	45636	45774	45879	45988	46086
Percentage change.....	2.53	1.19	0.87	0.59	0.51	0.37	0.41	0.30	0.23	0.24	0.21
LEISURE & HOSPITALITY.....	19289	19459	19643	19754	19829	19875	19932	19969	19994	20022	20046
Percentage change.....	-4.28	0.88	0.94	0.57	0.38	0.23	0.29	0.19	0.12	0.14	0.12
OTHER SERVICES.....	36956	36983	36831	36653	36500	36333	36211	36071	35921	35787	35656
Percentage change.....	-1.09	0.07	-0.41	-0.48	-0.42	-0.46	-0.34	-0.39	-0.42	-0.37	-0.37
GOVERNMENT.....	39462	39607	39736	39726	39712	39639	39604	39527	39427	39348	39269
Percentage change.....	0.75	0.37	0.33	-0.02	-0.03	-0.18	-0.09	-0.19	-0.25	-0.20	-0.20
FEDERAL, CIVILIAN.....	68466	69745	70424	70857	71241	71530	71861	72122	72334	72555	72761
Percentage change.....	2.32	1.87	0.97	0.62	0.54	0.41	0.46	0.36	0.29	0.31	0.28
STATE & LOCAL.....	35814	36031	36175	36232	36270	36262	36278	36257	36214	36176	36133
Percentage change.....	1.05	0.61	0.40	0.16	0.10	-0.02	0.04	-0.06	-0.12	-0.10	-0.12

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 9: Tennessee Average Annual Wage and Salary Rate by Sector (current dollars)

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL NONFARM.....	45176	46313	47504	48667	49838	51016	52219	53456	54665	55895	57122
Percentage change.....	1.41	2.52	2.57	2.45	2.41	2.36	2.36	2.37	2.26	2.25	2.20
NATURAL RESOURCES, MINING & CONSTRUCTION....	48878	50183	51808	53025	54212	55398	56584	57769	58955	60140	61326
Percentage change.....	0.40	2.67	3.24	2.35	2.24	2.19	2.14	2.10	2.05	2.01	1.97
MANUFACTURING.....	55405	56821	58152	59535	60989	62406	63943	65544	66987	68555	70008
Percentage change.....	1.05	2.56	2.34	2.38	2.44	2.32	2.46	2.50	2.20	2.34	2.12
DURABLE GOODS.....	53681	55213	56540	57875	59298	60645	62161	63777	65150	66714	68102
Percentage change.....	-1.29	2.85	2.40	2.36	2.46	2.27	2.50	2.60	2.15	2.40	2.08
NONDURABLE GOODS.....	58285	59566	60970	62502	64081	65677	67278	68882	70487	72092	73697
Percentage change.....	4.90	2.20	2.36	2.51	2.53	2.49	2.44	2.38	2.33	2.28	2.23
TRADE, TRANSPORTATION, UTILITIES.....	41394	42415	43524	44644	45729	46791	47823	48849	49819	50785	51735
Percentage change.....	0.62	2.47	2.62	2.57	2.43	2.32	2.21	2.15	1.99	1.94	1.87
WHOLESALE TRADE.....	64193	66072	67882	69694	71509	73325	75143	76961	78780	80599	82419
Percentage change.....	3.06	2.93	2.74	2.67	2.60	2.54	2.48	2.42	2.36	2.31	2.26
RETAIL TRADE.....	27893	28536	29156	29759	30346	30922	31488	32047	32599	33146	33690
Percentage change.....	-1.51	2.31	2.17	2.07	1.97	1.90	1.83	1.77	1.72	1.68	1.64
TRANSPORTATION & UTILITIES.....	52855	54195	55420	56603	57769	58928	60085	61240	62394	63549	64703
Percentage change.....	2.55	2.54	2.26	2.13	2.06	2.01	1.96	1.92	1.89	1.85	1.82
INFORMATION.....	60823	61922	63283	64759	66305	67894	69510	71142	72783	74431	76082
Percentage change.....	3.52	1.81	2.20	2.33	2.39	2.40	2.38	2.35	2.31	2.26	2.22
FINANCIAL ACTIVITIES.....	67072	69408	71470	73491	75505	77519	79532	81545	83558	85571	87584
Percentage change.....	-0.05	3.48	2.97	2.83	2.74	2.67	2.60	2.53	2.47	2.41	2.35
PROFESSIONAL & BUSINESS SERVICES.....	53588	55596	57545	59509	61489	63481	65485	67501	69526	71560	73602
Percentage change.....	3.25	3.75	3.51	3.41	3.33	3.24	3.16	3.08	3.00	2.93	2.85
EDUCATION & HEALTH SERVICES.....	47032	48207	49393	50569	51735	52894	54048	55199	56346	57492	58636
Percentage change.....	3.67	2.50	2.46	2.38	2.31	2.24	2.18	2.13	2.08	2.03	1.99
LEISURE & HOSPITALITY.....	20676	21127	21663	22173	22655	23131	23606	24081	24556	25030	25505
Percentage change.....	-3.21	2.18	2.54	2.35	2.17	2.10	2.05	2.01	1.97	1.93	1.90
OTHER SERVICES.....	39612	40152	40619	41141	41701	42285	42886	43497	44116	44739	45366
Percentage change.....	0.01	1.36	1.16	1.29	1.36	1.40	1.42	1.43	1.42	1.41	1.40
GOVERNMENT.....	42298	43001	43822	44590	45370	46133	46904	47665	48422	49192	49963
Percentage change.....	1.87	1.66	1.91	1.75	1.75	1.68	1.67	1.62	1.59	1.59	1.57
FEDERAL, CIVILIAN.....	73390	75723	77668	79534	81392	83249	85108	86971	88837	90706	92576
Percentage change.....	3.47	3.18	2.57	2.40	2.34	2.28	2.23	2.19	2.15	2.10	2.06
STATE & LOCAL.....	38388	39119	39896	40669	41438	42203	42965	43722	44476	45226	45973
Percentage change.....	2.17	1.90	1.99	1.94	1.89	1.85	1.80	1.76	1.72	1.69	1.65

Table 10: Tennessee Civilian Labor Force and Unemployment Rate

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CIVILIAN LABOR FORCE (THOUS).....	3118	3114	3151	3191	3236	3270	3300	3325	3345	3365	3389
Percentage change.....	0.15	-0.15	1.22	1.25	1.41	1.07	0.91	0.75	0.61	0.60	0.71
EMPLOYED PERSONS (THOUS).....	2863	2879	2932	2983	3031	3066	3097	3125	3150	3175	3201
Percentage change.....	-0.06	0.58	1.82	1.75	1.61	1.17	1.00	0.90	0.81	0.80	0.81
UNEMPLOYED PERSONS (THOUS).....	256	234	220	208	205	204	203	200	195	190	188
Percentage change.....	2.56	-8.34	-6.19	-5.35	-1.44	-0.49	-0.49	-1.48	-2.50	-2.56	-1.05
PARTICIPATION RATE (PERCENT).....	60.2	59.4	59.4	59.4	59.6	59.6	59.5	59.3	59.0	58.8	58.6
Percentage change.....	-1.02	-1.33	0.02	0.08	0.28	-0.02	-0.16	-0.30	-0.42	-0.42	-0.30
UNEMPLOYMENT RATE (PERCENT).....	8.2	7.5	7.0	6.5	6.3	6.2	6.2	6.0	5.8	5.6	5.5
Center for Business and Economic Research, University of Tennessee								Tennessee Econometric Model			

Table 11: Tennessee Taxable Sales (millions of 2009 dollars)

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL TAXABLE SALES.....	93995	95958	98038	99939	102104	104325	106680	108959	111299	113808	116397
Percentage change.....	1.61	2.09	2.17	1.94	2.17	2.18	2.26	2.14	2.15	2.25	2.28
AUTO DEALERS.....	9166	9648	9950	10255	10509	10647	10804	10959	11115	11284	11473
Percentage change.....	4.65	5.26	3.13	3.07	2.48	1.31	1.48	1.43	1.42	1.52	1.68
PURCHASES FROM MANUFACTURERS....	3799	3854	3914	3989	4073	4150	4241	4330	4421	4516	4614
Percentage change.....	-0.62	1.44	1.57	1.90	2.10	1.90	2.19	2.10	2.11	2.16	2.17
MISC DURABLE GOODS.....	15673	16076	16439	16768	17171	17592	18016	18438	18849	19272	19706
Percentage change.....	1.44	2.57	2.26	2.00	2.41	2.45	2.41	2.35	2.23	2.24	2.26
EATING AND DRINKING PLACES.....	9857	10140	10463	10755	11119	11425	11761	12097	12426	12696	12974
Percentage change.....	2.43	2.88	3.19	2.79	3.38	2.75	2.94	2.86	2.72	2.17	2.19
FOOD STORES.....	9375	9417	9589	9775	9945	10104	10277	10416	10565	10727	10877
Percentage change.....	2.58	0.44	1.83	1.94	1.73	1.60	1.71	1.36	1.43	1.53	1.40
LIQUOR STORES.....	783	816	837	860	886	917	954	992	1031	1072	1115
Percentage change.....	4.73	4.13	2.60	2.70	3.08	3.55	3.96	4.01	3.93	3.98	4.03
HOTELS AND MOTELS.....	2341	2371	2443	2518	2589	2650	2721	2788	2855	2924	2998
Percentage change.....	-0.28	1.25	3.05	3.08	2.80	2.37	2.69	2.47	2.37	2.44	2.50
OTHER RETAIL AND SERVICE.....	28951	29513	30134	30637	31249	31983	32737	33470	34234	35144	36086
Percentage change.....	1.68	1.94	2.11	1.67	2.00	2.35	2.36	2.24	2.28	2.66	2.68
MISC NONDURABLE GOODS.....	8144	8352	8508	8653	8852	9055	9266	9465	9689	9937	10194
Percentage change.....	2.46	2.56	1.86	1.71	2.29	2.29	2.34	2.14	2.37	2.56	2.58
TRANSPORTATION, COMMUNICATION....	5906	5772	5760	5728	5711	5802	5903	6002	6115	6235	6359
Percentage change.....	-4.65	-2.26	-0.21	-0.56	-0.29	1.60	1.73	1.69	1.87	1.97	1.99
PER CAPITA (\$.).....	14401	14547	14708	14839	15007	15181	15370	15546	15728	15930	16141
Percentage change.....	0.54	1.02	1.10	0.89	1.13	1.15	1.25	1.14	1.17	1.29	1.32

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 12: Tennessee Taxable Sales (millions of current dollars)

January 2014

	Forecast Data										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL TAXABLE SALES.....	100752	104185	108123	112179	116657	121421	126348	131396	136696	142282	148098
Percentage change.....	2.75	3.41	3.78	3.75	3.99	4.08	4.06	4.00	4.03	4.09	4.09
AUTO DEALERS.....	9825	10475	10973	11511	12007	12391	12796	13216	13651	14107	14598
Percentage change.....	5.82	6.61	4.76	4.90	4.30	3.20	3.27	3.28	3.29	3.34	3.48
PURCHASES FROM MANUFACTURERS....	4072	4184	4317	4477	4653	4830	5023	5221	5430	5646	5871
Percentage change.....	0.47	2.75	3.17	3.71	3.92	3.80	3.99	3.96	3.99	3.99	3.98
MISC DURABLE GOODS.....	16800	17454	18130	18821	19619	20474	21337	22235	23150	24094	25074
Percentage change.....	2.58	3.89	3.87	3.81	4.24	4.36	4.21	4.21	4.11	4.08	4.07
EATING AND DRINKING PLACES.....	10565	11010	11540	12073	12704	13297	13929	14588	15262	15872	16507
Percentage change.....	3.57	4.21	4.82	4.62	5.23	4.67	4.75	4.73	4.62	4.00	4.00
FOOD STORES.....	10049	10224	10576	10973	11362	11760	12172	12561	12976	13410	13839
Percentage change.....	3.71	1.74	3.44	3.75	3.55	3.50	3.50	3.20	3.30	3.35	3.20
LIQUOR STORES.....	840	886	923	965	1012	1068	1130	1196	1266	1340	1419
Percentage change.....	5.91	5.47	4.22	4.52	4.92	5.49	5.79	5.90	5.84	5.85	5.87
HOTELS AND MOTELS.....	2510	2574	2694	2827	2958	3084	3223	3363	3506	3656	3814
Percentage change.....	0.83	2.56	4.68	4.91	4.64	4.28	4.50	4.33	4.26	4.28	4.32
OTHER RETAIL AND SERVICE.....	31032	32043	33234	34390	35703	37224	38773	40362	42045	43937	45915
Percentage change.....	2.82	3.26	3.72	3.48	3.82	4.26	4.16	4.10	4.17	4.50	4.50
MISC NONDURABLE GOODS.....	8729	9068	9383	9713	10114	10538	10975	11414	11900	12423	12970
Percentage change.....	3.61	3.88	3.47	3.52	4.12	4.20	4.14	4.00	4.26	4.40	4.40
TRANSPORTATION, COMMUNICATION.....	6330	6267	6352	6429	6525	6753	6991	7238	7510	7795	8091
Percentage change.....	-3.59	-1.00	1.36	1.21	1.49	3.50	3.52	3.54	3.75	3.80	3.80
PER CAPITA (\$)......	15436	15794	16221	16656	17146	17668	18204	18747	19317	19916	20537
Percentage change.....	1.66	2.32	2.70	2.68	2.94	3.04	3.03	2.99	3.04	3.10	3.12

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 13: Tennessee Gross Domestic Product by Sector (millions of 2005 dollars)

January 2014

	Forecast Data											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GROSS DOMESTIC PRODUCT.....	239,634	245,770	252,651	259,953	267,405	274,949	281,978	288,755	295,391	302,479	309,621	317,153
Percentage change.....	3.23	2.56	2.80	2.89	2.87	2.82	2.56	2.40	2.30	2.40	2.36	2.43
NATURAL RESOURCES & MINING.....	1,326	1,353	1,366	1,380	1,393	1,408	1,422	1,436	1,451	1,470	1,490	1,514
Percentage change.....	4.00	2.00	1.02	0.98	0.98	1.06	1.01	0.97	1.02	1.34	1.34	1.62
CONSTRUCTION.....	7,814	7,978	8,225	8,496	8,649	8,711	8,737	8,703	8,645	8,561	8,477	8,418
Percentage change.....	2.30	2.10	3.10	3.30	1.79	0.72	0.30	-0.39	-0.66	-0.98	-0.98	-0.70
MANUFACTURING.....	36,380	37,687	38,958	40,157	41,317	42,455	43,681	44,843	46,007	47,203	48,407	49,695
Percentage change.....	4.86	3.59	3.37	3.08	2.89	2.75	2.89	2.66	2.60	2.60	2.55	2.66
DURABLE GOODS.....	21,748	22,801	23,827	24,778	25,733	26,635	27,586	28,460	29,383	30,350	31,315	32,343
Percentage change.....	6.78	4.84	4.50	3.99	3.85	3.51	3.57	3.17	3.24	3.29	3.18	3.28
NONDURABLE GOODS.....	14,632	14,886	15,131	15,378	15,585	15,820	16,095	16,383	16,624	16,853	17,092	17,351
Percentage change.....	2.12	1.74	1.65	1.63	1.34	1.51	1.74	1.79	1.47	1.38	1.42	1.52
TRADE, TRANSPORTATION, UTILITIES.....	47,191	48,269	49,667	51,098	52,503	54,110	55,480	56,710	57,793	59,141	60,462	61,810
Percentage change.....	4.39	3.14	3.18	3.36	3.78	3.79	3.12	2.59	2.18	2.55	2.44	2.39
WHOLESALE TRADE.....	14,434	14,838	15,306	15,811	16,325	16,863	17,369	17,890	18,402	18,945	19,485	20,052
Percentage change.....	2.50	2.80	3.15	3.30	3.25	3.30	3.00	3.00	2.86	2.95	2.85	2.91
RETAIL TRADE.....	19,033	19,414	19,987	20,377	20,821	21,323	21,728	22,064	22,323	22,740	23,143	23,561
Percentage change.....	2.90	2.00	2.95	1.95	2.18	2.41	1.90	1.55	1.17	1.87	1.77	1.81
TRANSPORTATION & UTILITIES.....	13,723	14,017	14,375	14,911	15,358	15,925	16,383	16,755	17,069	17,456	17,835	18,197
Percentage change.....	3.80	2.14	2.55	3.73	3.00	3.69	2.88	2.27	1.87	2.27	2.17	2.03
INFORMATION.....	8,259	8,579	9,019	9,473	9,956	10,463	10,933	11,431	11,947	12,477	12,976	13,496
Percentage change.....	4.20	3.87	5.14	5.03	5.10	5.09	4.49	4.56	4.51	4.44	4.00	4.00
FINANCIAL ACTIVITIES.....	41,821	42,867	43,938	45,037	46,230	47,358	48,419	49,499	50,642	51,827	53,061	54,350
Percentage change.....	2.80	2.50	2.50	2.50	2.65	2.44	2.24	2.23	2.31	2.34	2.38	2.43
PROFESSIONAL & BUSINESS SERVICES.....	27,676	29,060	30,399	31,792	33,216	34,737	36,339	37,923	39,497	41,160	42,901	44,728
Percentage change.....	5.00	5.00	4.61	4.58	4.48	4.58	4.61	4.36	4.15	4.21	4.23	4.26
EDUCATION & HEALTH SERVICES.....	26,145	26,681	27,252	27,895	28,612	29,345	30,087	30,812	31,512	32,221	32,939	33,667
Percentage change.....	2.72	2.05	2.14	2.36	2.57	2.56	2.53	2.41	2.27	2.25	2.23	2.21
LEISURE & HOSPITALITY.....	10,448	10,887	11,262	11,630	11,984	12,273	12,450	12,620	12,754	12,916	13,048	13,243
Percentage change.....	3.98	4.20	3.45	3.27	3.04	2.41	1.44	1.37	1.06	1.27	1.02	1.50
OTHER SERVICES.....	6,349	6,392	6,431	6,494	6,529	6,593	6,632	6,670	6,733	6,791	6,827	6,878
Percentage change.....	0.73	0.67	0.61	0.98	0.54	0.98	0.60	0.57	0.94	0.87	0.52	0.76
GOVERNMENT.....	25,895	25,661	25,689	25,828	26,006	26,213	26,469	26,739	27,003	27,266	27,548	27,828
Percentage change.....	-0.23	-0.90	0.11	0.54	0.69	0.79	0.98	1.02	0.99	0.97	1.03	1.02
FEDERAL.....	6,296	6,161	6,033	5,916	5,779	5,654	5,532	5,440	5,349	5,258	5,173	5,097
Percentage change.....	-1.83	-2.15	-2.08	-1.93	-2.31	-2.16	-2.16	-1.67	-1.68	-1.69	-1.63	-1.46
STATE & LOCAL.....	19,599	19,795	19,953	20,212	20,532	20,868	21,252	21,620	21,981	22,339	22,712	23,074
Percentage change.....	0.30	1.00	0.80	1.30	1.58	1.64	1.84	1.73	1.67	1.63	1.67	1.59

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 14: Tennessee Durable Goods Manufacturing Gross Domestic Product (millions of 2005 dollars)

January 2014

	Forecast Data											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
DURABLE GOODS.....	21,748	22,801	23,827	24,778	25,733	26,635	27,586	28,460	29,383	30,350	31,315	32,343
Percentage change.....	6.78	4.84	4.50	3.99	3.85	3.51	3.57	3.17	3.24	3.29	3.18	3.28
WOOD PRODUCTS.....	1,015	1,041	1,067	1,094	1,122	1,150	1,178	1,207	1,237	1,267	1,299	1,325
Percentage change.....	7.75	2.57	2.49	2.56	2.54	2.49	2.42	2.45	2.51	2.44	2.52	2.00
NONMETALLIC MINERAL PRODUCTS.....	899	917	944	974	1,004	1,016	1,031	1,044	1,060	1,074	1,091	1,104
Percentage change.....	5.82	1.96	2.94	3.13	3.13	1.15	1.50	1.26	1.58	1.26	1.61	1.22
PRIMARY METALS.....	994	1,034	1,071	1,112	1,147	1,183	1,221	1,246	1,262	1,281	1,300	1,320
Percentage change.....	5.00	4.00	3.57	3.87	3.10	3.10	3.24	2.07	1.29	1.50	1.50	1.50
FABRICATED METAL PRODUCTS.....	3,102	3,188	3,279	3,370	3,466	3,509	3,548	3,592	3,636	3,684	3,730	3,776
Percentage change.....	3.56	2.80	2.85	2.77	2.83	1.26	1.10	1.25	1.22	1.31	1.26	1.23
MACHINERY.....	2,528	2,609	2,685	2,771	2,855	2,945	3,033	3,114	3,207	3,296	3,390	3,479
Percentage change.....	4.52	3.20	2.90	3.19	3.03	3.18	2.99	2.67	2.98	2.76	2.87	2.63
COMPUTER & ELECTRONIC PRODUCTS.....	3,076	3,291	3,506	3,722	3,985	4,226	4,508	4,783	5,099	5,434	5,761	6,150
Percentage change.....	8.00	7.00	6.53	6.15	7.07	6.05	6.68	6.10	6.60	6.57	6.02	6.76
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	2,413	2,533	2,660	2,763	2,857	2,954	3,068	3,172	3,280	3,397	3,519	3,635
Percentage change.....	7.14	5.00	5.00	3.85	3.42	3.39	3.88	3.37	3.40	3.58	3.60	3.27
MOTOR VEHICLES, BODIES & TRAILERS, & PARTS.....	4,970	5,368	5,768	6,228	6,730	7,261	7,562	7,812	8,067	8,326	8,588	8,847
Percentage change.....	20.00	8.00	7.45	7.97	8.07	7.89	4.14	3.31	3.26	3.21	3.15	3.01
OTHER TRANSPORTATION EQUIPMENT.....	393	417	433	455	478	501	518	538	555	573	594	617
Percentage change.....	8.00	6.00	4.00	5.04	4.97	4.85	3.40	3.83	3.09	3.38	3.63	3.84
FURNITURE.....	374	367	360	353	345	340	335	331	325	321	317	314
Percentage change.....	-1.21	-1.89	-2.09	-1.99	-2.20	-1.48	-1.24	-1.39	-1.82	-1.16	-1.16	-1.16
MISCELLANEOUS DURABLE GOODS.....	2,314	2,392	2,474	2,550	2,622	2,701	2,778	2,853	2,926	3,007	3,073	3,164
Percentage change.....	3.85	3.40	3.40	3.09	2.81	3.02	2.86	2.70	2.55	2.75	2.21	2.97

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 15: Tennessee Nondurable Goods Manufacturing Gross Domestic Product (millions of 2005 dollars)

January 2014

	Forecast Data											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
NONDURABLE GOODS.....	14,632	14,886	15,131	15,378	15,585	15,820	16,095	16,383	16,624	16,853	17,092	17,351
Percentage change.....	2.12	1.74	1.65	1.63	1.34	1.51	1.74	1.79	1.47	1.38	1.42	1.52
FOOD AND BEVERAGE & TOBACCO.....	5,968	6,099	6,233	6,371	6,498	6,645	6,816	7,000	7,169	7,339	7,532	7,729
Percentage change.....	2.95	2.20	2.20	2.20	2.00	2.26	2.58	2.70	2.41	2.37	2.63	2.61
TEXTILE MILLS & TEXTILE PRODUCT MILLS	368	372	376	375	376	375	376	375	374	375	375	378
Percentage change.....	2.00	1.00	1.00	-0.27	0.33	-0.15	0.18	-0.35	-0.10	0.19	0.07	0.64
APPAREL & LEATHER PRODUCTS.....	228	219	211	202	194	186	178	171	164	157	151	145
Percentage change.....	-4.12	-4.05	-3.83	-4.08	-3.92	-4.07	-4.19	-4.18	-3.85	-4.19	-3.91	-4.13
PAPER.....	1,959	1,979	2,009	2,041	2,074	2,105	2,152	2,204	2,251	2,288	2,327	2,382
Percentage change.....	1.00	1.00	1.52	1.60	1.60	1.51	2.21	2.45	2.12	1.62	1.72	2.35
PRINTING & RELATED SUPPORT.....	844	841	841	840	839	839	836	838	841	840	839	838
Percentage change.....	0.14	-0.39	0.01	-0.17	-0.04	-0.06	-0.34	0.30	0.35	-0.10	-0.19	-0.16
CHEMICALS.....	3,186	3,250	3,315	3,398	3,483	3,511	3,540	3,569	3,569	3,569	3,569	3,569
Percentage change.....	2.00	2.00	2.00	2.50	2.50	0.79	0.83	0.83	0.00	0.00	0.00	0.00
PLASTICS & RUBBER.....	1,748	1,791	1,831	1,871	1,908	1,944	1,985	2,015	2,045	2,074	2,087	2,102
Percentage change.....	2.80	2.48	2.24	2.20	1.94	1.90	2.10	1.52	1.49	1.44	0.62	0.72
MISCELLANEOUS NONDURABLE GOODS.....	330	335	338	342	345	348	347	346	347	348	349	348
Percentage change.....	1.50	1.50	1.00	1.00	1.00	1.00	-0.48	-0.08	0.09	0.31	0.41	-0.28

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

APPENDIX B: HISTORICAL DATA

In this section—

Appendix B: Historical Data

Quarterly	pages 42–65 (2010:2 to 2013:3)
Annual	pages 66–80 (2001 to 2012)

Quarterly History Tables

Table 1:	Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted.....	42
Table 2:	Selected Per Capita U.S. and Tennessee Economic Indicators, Seasonally Adjusted.....	44
Table 3:	Tennessee Personal Income Components, Seasonally Adjusted (millions of 2009 dollars).....	45
Table 4:	Tennessee Personal Income Components, Seasonally Adjusted (millions of current dollars).....	46
Table 5:	Tennessee Nonfarm Employment by Sector, Not Seasonally Adjusted (thousands of jobs).....	47
Table 6:	Tennessee Durable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs).....	48
Table 7:	Tennessee Nondurable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs).....	49
Table 8:	Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs).....	50
Table 9:	Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs).....	52
Table 10:	Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs).....	53
Table 11:	Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (2009 dollars).....	54
Table 12:	Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars).....	55
Table 13:	Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (current dollars).....	57
Table 14:	Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars).....	58
Table 15:	Tennessee Civilian Labor Force and Unemployment Rate, Not Seasonally Adjusted.....	60
Table 16:	Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted.....	61
Table 17:	Tennessee Taxable Sales, Not Seasonally Adjusted (millions of 2009 dollars).....	62
Table 18:	Tennessee Taxable Sales, Seasonally Adjusted (millions of 2009 dollars).....	63
Table 19:	Tennessee Taxable Sales, Not Seasonally Adjusted (millions of current dollars).....	64
Table 20:	Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars).....	65

Annual History Tables

Table 1:	Selected U.S. and Tennessee Economic Indicators.....	66
Table 2:	Selected Per Capita U.S. and Tennessee Economic Indicators.....	67
Table 3:	Tennessee Personal Income Components (millions of 2009 dollars).....	68
Table 4:	Tennessee Personal Income Components (millions of current dollars).....	69
Table 5:	Tennessee Nonfarm Employment by Sector (thousands of jobs).....	70
Table 6:	Tennessee Durable Goods Manufacturing Employment (thousands of jobs).....	71
Table 7:	Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs).....	72
Table 8:	Tennessee Average Annual Wage and Salary Rate by Sector (2009 dollars).....	73
Table 9:	Tennessee Average Annual Wage and Salary Rate by Sector (current dollars).....	74
Table 10:	Tennessee Civilian Labor Force and Unemployment Rate.....	75
Table 11:	Tennessee Taxable Sales (millions of 2009 dollars).....	76
Table 12:	Tennessee Taxable Sales (millions of current dollars).....	77
Table 13:	Tennessee Gross Domestic Product by Sector (millions of 2005 dollars).....	78
Table 14:	Tennessee Durable Goods Manufacturing Gross Domestic Product (millions of 2005 dollars).....	79
Table 15:	Tennessee Nondurable Goods Manufacturing Gross Domestic Product (millions of 2005 dollars).....	80

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

January 2014

	Historical Data															Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012	
US GDP (Bil2009\$) SAAR.....	14738.0	14839.3	14942.4	14894.0	15011.3	15062.1	15242.1	15381.6	15427.7	15534.0	15539.6	15583.9	15679.7	15839.3	14779.4	15052.4	15470.7	
% Chg Prev Qtr SAAR.....	3.90	2.78	2.81	-1.29	3.19	1.36	4.87	3.71	1.20	2.78	0.14	1.15	2.48	4.13	2.51	1.85	2.78	
% Chg Same Qtr Last Yr.....	2.65	3.03	2.77	2.03	1.85	1.50	2.01	3.27	2.77	3.13	1.95	1.32	1.63	1.97	2.51	1.85	2.78	
US GDP (Bil\$) SAAR.....	14879.2	15049.8	15231.7	15242.9	15461.9	15611.8	15818.7	16041.6	16160.4	16356.0	16420.3	16535.3	16661.0	16912.9	14958.3	15533.8	16244.6	
% Chg Prev Qtr SAAR.....	5.76	4.67	4.92	0.29	5.87	3.93	5.41	5.76	3.00	4.93	1.58	2.83	3.08	6.19	3.75	3.85	4.58	
% Chg Same Qtr Last Yr.....	3.74	4.63	4.58	3.89	3.92	3.73	3.85	5.24	4.52	4.77	3.80	3.08	3.10	3.40	3.75	3.85	4.58	
TN PERSONAL INCOME (MIL2009\$) SAAR.....	221498	222730	222691	227145	227880	228089	230026	234233	235528	234776	239465	236765	239467	240081	221556	228285	236000	
% Chg Prev Qtr SAAR.....	4.07	2.24	-0.07	8.24	1.30	0.37	3.44	7.52	2.23	-1.27	8.23	-4.43	4.64	1.03	2.10	3.04	3.38	
% Chg Same Qtr Last Yr.....	1.85	3.37	2.51	3.58	2.88	2.41	3.29	3.12	3.36	2.93	4.10	1.08	1.67	2.26	2.10	3.04	3.38	
US PERSONAL INCOME (BIL2009\$) SAAR.....	12204	12293	12393	12651	12650	12708	12684	12846	12910	12903	13199	13026	13180	13248	12232	12673	12964	
% Chg Prev Qtr SAAR.....	5.55	2.97	3.27	8.60	-0.02	1.84	-0.75	5.19	2.00	-0.22	9.51	-5.14	4.81	2.08	1.24	3.61	2.30	
% Chg Same Qtr Last Yr.....	0.49	2.22	3.09	5.07	3.66	3.37	2.35	1.54	2.05	1.53	4.06	1.40	2.09	2.67	1.24	3.61	2.30	
TN PERSONAL INCOME (MIL\$) SAAR.....	224595	226512	227678	233950	236853	238419	241251	247048	249071	249315	255322	253123	255937	257825	225225	237618	250189	
% Chg Prev Qtr SAAR.....	4.54	3.46	2.07	11.48	5.06	2.67	4.84	9.96	3.32	0.39	9.99	-3.40	4.52	2.98	3.79	5.50	5.29	
% Chg Same Qtr Last Yr.....	3.66	4.86	3.83	5.33	5.46	5.26	5.96	5.60	5.16	4.57	5.83	2.46	2.76	3.41	3.79	5.50	5.29	
US PERSONAL INCOME (BIL\$) SAAR.....	12374	12502	12670	13030	13149	13284	13303	13549	13652	13702	14073	13926	14086	14226	12435	13191	13744	
% Chg Prev Qtr SAAR.....	6.04	4.20	5.48	11.86	3.69	4.17	0.59	7.59	3.08	1.47	11.29	-4.12	4.68	4.04	2.92	6.08	4.19	
% Chg Same Qtr Last Yr.....	2.28	3.69	4.41	6.85	6.26	6.25	5.00	3.98	3.83	3.15	5.79	2.78	3.18	3.83	2.92	6.08	4.19	
TN NONFARM JOBS (THOUS).....	2618.6	2621.0	2628.7	2635.1	2652.8	2670.8	2684.7	2699.0	2713.1	2716.2	2731.6	2751.7	2758.3	2749.0	2615.3	2660.9	2715.0	
% Chg Prev Qtr SAAR.....	4.06	0.35	1.19	0.98	2.71	2.74	2.09	2.15	2.11	0.46	2.30	2.97	0.97	-1.34	-0.16	1.74	2.03	
% Chg Same Qtr Last Yr.....	0.07	0.88	1.23	1.64	1.30	1.90	2.13	2.42	2.27	1.70	1.75	1.95	1.67	1.21	-0.16	1.74	2.03	
US NONFARM JOBS (MIL).....	130.0	130.0	130.3	130.7	131.3	131.7	132.3	133.1	133.5	133.9	134.5	135.1	135.7	136.2	129.9	131.5	133.7	
% Chg Prev Qtr SAAR.....	1.94	-0.12	0.97	1.17	2.01	1.28	1.69	2.35	1.36	1.23	1.64	1.93	1.73	1.42	-0.72	1.22	1.70	
% Chg Same Qtr Last Yr.....	-0.77	-0.03	0.58	0.99	1.01	1.36	1.54	1.83	1.67	1.66	1.64	1.54	1.63	1.68	-0.72	1.22	1.70	
TN MFG JOBS (THOUS).....	299.3	299.6	299.6	302.4	303.8	304.6	307.0	309.3	313.4	315.0	316.2	318.5	319.7	321.3	298.9	304.4	313.5	
% Chg Prev Qtr SAAR.....	2.83	0.34	0.01	3.83	1.84	0.99	3.19	3.06	5.49	1.96	1.61	2.88	1.52	2.11	-3.32	1.84	2.97	
% Chg Same Qtr Last Yr.....	-2.94	-0.89	-0.02	1.74	1.49	1.66	2.46	2.26	3.17	3.41	3.02	2.97	1.99	2.03	-3.32	1.84	2.97	
US MFG JOBS (MIL).....	11.5	11.6	11.6	11.7	11.7	11.8	11.8	11.9	11.9	11.9	11.9	12.0	12.0	12.0	11.5	11.7	11.9	
% Chg Prev Qtr SAAR.....	2.12	1.08	0.72	2.86	2.05	1.41	0.76	3.27	1.81	0.49	-0.06	1.31	-0.26	-0.36	-2.69	1.72	1.65	
% Chg Same Qtr Last Yr.....	-2.95	-0.60	0.59	1.69	1.68	1.76	1.77	1.87	1.81	1.58	1.37	0.89	0.37	0.16	-2.69	1.72	1.65	
TN UNEMPLOYMENT RATE (%).....	9.7	9.5	9.6	9.6	9.5	9.3	8.6	8.1	8.1	8.1	7.7	7.8	8.3	8.5	9.8	9.2	8.0	
US UNEMPLOYMENT RATE (%).....	9.6	9.5	9.5	9.0	9.0	9.0	8.7	8.3	8.2	8.0	7.8	7.7	7.6	7.3	9.6	8.9	8.1	

(CONTINUED ON NEXT PAGE)

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

January 2014

	Historical Data															Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012	
CHAINED PRICE INDEX, GDP																		
(2009=100.0).....	101.0	101.4	101.9	102.4	103.0	103.7	103.8	104.3	104.8	105.3	105.6	106.0	106.2	106.7	101.2	103.2	105.0	
% Chg Prev Qtr SAAR.....	1.86	1.83	2.05	1.60	2.64	2.46	0.51	2.00	1.76	2.29	1.12	1.35	0.65	1.97	1.22	1.96	1.75	
% Chg Same Qtr Last Yr.....	1.08	1.55	1.77	1.84	2.03	2.19	1.80	1.90	1.68	1.63	1.79	1.63	1.35	1.27	1.22	1.96	1.75	
US PERS CONSUMP DEFL (2009=100.0).....	101.4	101.7	102.2	103.0	103.9	104.5	104.9	105.5	105.8	106.2	106.6	106.9	106.9	107.4	101.7	104.1	106.0	
% Chg Prev Qtr SAAR.....	0.46	1.19	2.14	2.99	3.71	2.29	1.35	2.27	1.06	1.69	1.63	1.08	-0.12	1.92	1.65	2.39	1.85	
% Chg Same Qtr Last Yr.....	1.78	1.44	1.29	1.69	2.50	2.78	2.58	2.40	1.74	1.59	1.66	1.36	1.07	1.12	1.65	2.39	1.85	
CONSUMER PRICE INDEX,																		
ALL-URBAN (82-84=1.000).....	2.173	2.180	2.196	2.220	2.246	2.262	2.270	2.283	2.288	2.300	2.313	2.321	2.321	2.336	2.181	2.249	2.296	
% Chg Prev Qtr SAAR.....	-0.23	1.35	3.03	4.41	4.65	2.90	1.41	2.31	1.01	2.09	2.19	1.44	-0.03	2.63	1.64	3.14	2.08	
% Chg Same Qtr Last Yr.....	1.78	1.24	1.22	2.13	3.35	3.75	3.34	2.81	1.90	1.70	1.90	1.68	1.42	1.55	1.64	3.14	2.08	
BANK PRIME INTEREST RATE (%).....	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
FEDERAL FUNDS RATE (% per annum).....	0.193	0.187	0.187	0.157	0.093	0.083	0.073	0.103	0.153	0.143	0.160	0.143	0.117	0.083	0.175	0.102	0.140	
30-YEAR FIXED MORTGAGE RATE (%).....	4.9	4.4	4.4	4.8	4.7	4.3	4.0	3.9	3.8	3.6	3.4	3.5	3.7	4.4	4.7	4.5	3.7	
TN TAXABLE SALES (MIL2009\$).....	21800	21833	21957	22075	22379	22670	22846	23522	22977	22875	23131	23398	23504	23453	86963	89969	92504	
% Chg Prev Qtr SAAR.....	8.23	0.61	2.29	2.17	5.62	5.30	3.14	12.38	-8.96	-1.76	4.55	4.71	1.81	-0.86	0.86	3.46	2.82	
% Chg Same Qtr Last Yr.....	1.44	2.09	2.18	3.28	2.66	3.83	4.05	6.56	2.67	0.90	1.25	-0.53	2.29	2.53	0.86	3.46	2.82	
TN TAXABLE SALES (MIL\$).....	22104	22204	22449	22736	23260	23696	23960	24809	24298	24291	24662	25015	25120	25186	88404	93653	98060	
% Chg Prev Qtr SAAR.....	8.72	1.81	4.49	5.23	9.54	7.72	4.53	14.94	-7.99	-0.11	6.25	5.85	1.69	1.06	2.53	5.94	4.71	
% Chg Same Qtr Last Yr.....	3.24	3.57	3.49	5.03	5.23	6.72	6.73	9.12	4.46	2.51	2.93	0.83	3.38	3.69	2.53	5.94	4.71	
TN AVG ANNUAL WAGE, NONFARM																		
(2009\$).....	41388	41506	41647	41717	41346	41491	40958	42031	42002	41644	42418	41867	42110	42217	41447	41378	42024	
% Chg Prev Qtr SAAR.....	1.40	1.15	1.37	0.67	-3.51	1.41	-5.04	10.89	-0.28	-3.36	7.65	-5.09	2.34	1.02	1.54	-0.16	1.56	
% Chg Same Qtr Last Yr.....	1.00	1.78	1.44	1.15	-0.10	-0.04	-1.65	0.75	1.59	0.37	3.56	-0.39	0.26	1.38	1.54	-0.16	1.56	
TN AVG ANNUAL WAGE, NONFARM (\$)......	41967	42211	42580	42967	42974	43371	42957	44330	44417	44223	45227	44760	45007	45338	42133	43067	44549	
% Chg Prev Qtr SAAR.....	1.86	2.35	3.54	3.69	0.07	3.74	-3.76	13.41	0.78	-1.73	9.40	-4.07	2.23	2.97	3.21	2.22	3.44	
% Chg Same Qtr Last Yr.....	2.79	3.24	2.75	2.86	2.40	2.75	0.89	3.17	3.36	1.97	5.28	0.97	1.33	2.52	3.21	2.22	3.44	

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators, Seasonally Adjusted

January 2014

	Historical Data														Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012
US GDP (2009\$) SAAR.....	47580	47809	48056	47823	48112	48176	48666	49033	49091	49334	49256	49302	49509	49917	47665	48195	49179
% Chg Prev Qtr SAAR.....	3.14	1.93	2.08	-1.92	2.44	0.53	4.13	3.05	0.47	1.99	-0.63	0.37	1.69	3.33	1.69	1.11	2.04
% Chg Same Qtr Last Yr.....	1.83	2.21	1.97	1.29	1.12	0.77	1.27	2.53	2.04	2.40	1.21	0.55	0.85	1.18	1.69	1.11	2.04
US GDP (\$) SAAR.....	48036	48487	48986	48943	49556	49934	50507	51137	51422	51944	52048	52312	52608	53300	48243	49736	51639
% Chg Prev Qtr SAAR.....	4.98	3.80	4.18	-0.35	5.10	3.09	4.67	5.08	2.25	4.12	0.80	2.04	2.28	5.37	2.92	3.10	3.83
% Chg Same Qtr Last Yr.....	2.91	3.79	3.78	3.13	3.16	2.98	3.10	4.48	3.77	4.03	3.05	2.30	2.31	2.61	2.92	3.10	3.83
TN PERSONAL INCOME (2009\$) SAAR.....	35014	35153	35091	35696	35714	35651	35857	36415	36519	36305	36932	36419	36737	36734	34995	35729	36543
% Chg Prev Qtr SAAR.....	3.41	1.60	-0.70	7.07	0.21	-0.71	2.33	6.38	1.15	-2.32	7.09	-5.45	3.54	-0.03	1.34	2.10	2.28
% Chg Same Qtr Last Yr.....	1.06	2.64	1.86	2.81	2.00	1.42	2.18	2.01	2.25	1.84	3.00	0.01	0.60	1.18	1.34	2.10	2.28
US PERSONAL INCOME (2009\$) SAAR.....	39399	39606	39855	40621	40545	40646	40499	40950	41078	40977	41838	41209	41615	41749	39451	40578	41211
% Chg Prev Qtr SAAR.....	4.78	2.12	2.54	7.91	-0.75	1.01	-1.44	4.52	1.26	-0.98	8.67	-5.87	4.00	1.29	0.43	2.86	1.56
% Chg Same Qtr Last Yr.....	-0.32	1.40	2.29	4.31	2.91	2.63	1.62	0.81	1.32	0.81	3.31	0.63	1.31	1.89	0.43	2.86	1.56
TN PERSONAL INCOME (\$) SAAR.....	35503	35750	35877	36765	37121	37265	37606	38407	38618	38554	39378	38935	39264	39449	35574	37189	38739
% Chg Prev Qtr SAAR.....	3.88	2.81	1.43	10.28	3.92	1.57	3.71	8.79	2.22	-0.67	8.83	-4.42	3.42	1.90	3.02	4.54	4.17
% Chg Same Qtr Last Yr.....	2.85	4.12	3.18	4.55	4.56	4.24	4.82	4.47	4.03	3.46	4.71	1.37	1.67	2.32	3.02	4.54	4.17
US PERSONAL INCOME (\$) SAAR.....	39949	40279	40748	41838	42141	42487	42475	43190	43440	43514	44608	44056	44478	44833	40105	42236	43689
% Chg Prev Qtr SAAR.....	5.26	3.34	4.74	11.14	2.94	3.32	-0.11	6.90	2.34	0.69	10.44	-4.86	3.88	3.24	2.10	5.31	3.44
% Chg Same Qtr Last Yr.....	1.46	2.86	3.61	6.08	5.49	5.48	4.24	3.23	3.08	2.42	5.02	2.01	2.39	3.03	2.10	5.31	3.44
TN TAXABLE SALES (2009\$).....	3446	3446	3460	3469	3507	3543	3561	3657	3563	3537	3567	3599	3606	3588	13736	14081	14324
% Chg Prev Qtr SAAR.....	7.54	-0.02	1.65	1.06	4.48	4.17	2.04	11.18	-9.92	-2.80	3.45	3.61	0.74	-1.90	0.10	2.51	1.73
% Chg Same Qtr Last Yr.....	0.65	1.37	1.53	2.52	1.78	2.83	2.93	5.41	1.57	-0.17	0.17	-1.58	1.21	1.45	0.10	2.51	1.73
TN TAXABLE SALES (\$).....	3494	3504	3537	3573	3645	3704	3735	3857	3767	3756	3804	3848	3854	3854	13963	14657	15184
% Chg Prev Qtr SAAR.....	8.04	1.17	3.83	4.09	8.36	6.56	3.41	13.71	-8.97	-1.16	5.13	4.73	0.62	0.00	1.77	4.97	3.60
% Chg Same Qtr Last Yr.....	2.44	2.84	2.84	4.25	4.33	5.69	5.59	7.95	3.35	1.42	1.84	-0.24	2.29	2.59	1.77	4.97	3.60

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 3: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of 2009 dollars)

January 2014

	Historical Data														Annual		
	2010:1	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2010	2011	2012
TN PERSONAL INCOME.....	219302	221498	222730	222691	227145	227880	228089	230026	234233	235528	234776	239465	236765	239467	221556	228285	236000
% Chg Prev Qtr SAAR.....	3.85959	4.07	2.24	-0.07	8.24	1.30	0.37	3.44	7.52	2.23	-1.27	8.23	-4.43	4.64	2.10	3.04	3.38
% Chg Same Qtr Last Yr.....	0.678	1.85	3.37	2.51	3.58	2.88	2.41	3.29	3.12	3.36	2.93	4.10	1.08	1.67	2.10	3.04	3.38
WAGES AND SALARIES.....	107952	109392	109789	110461	110862	110586	111696	110827	114298	114807	113960	116721	116051	117009	109398	110993	114946
% Chg Prev Qtr SAAR.....	1.16314	5.44	1.46	2.47	1.46	-0.99	4.07	-3.07	13.13	1.79	-2.92	10.05	-2.28	3.34	1.33	1.46	3.56
% Chg Same Qtr Last Yr.....	-0.8971	1.02	2.61	2.62	2.70	1.09	1.74	0.33	3.10	3.82	2.03	5.32	1.53	1.92	1.33	1.46	3.56
OTHER LABOR INCOME.....	25512.5	25490	25452	25573	25957	25943	26220	26476	27165	27481	27479	27739	27853	28016	25507	26149	27466
% Chg Prev Qtr SAAR.....	3.88286	-0.35	-0.59	1.91	6.14	-0.21	4.33	3.97	10.82	4.73	-0.03	3.83	1.65	2.36	-1.06	2.52	5.04
% Chg Same Qtr Last Yr.....	-3.2606	-1.94	-0.13	1.20	1.74	1.78	3.01	3.53	4.65	5.93	4.80	4.77	2.53	1.95	-1.06	2.52	5.04
PROPRIETORS INCOME.....	26135.8	26152	25845	26013	27369	27899	28311	28505	29720	29625	29557	30158	30753	30961	26037	28021	29765
% Chg Prev Qtr SAAR.....	-13.848	0.25	-4.61	2.62	22.53	7.98	6.03	2.78	18.17	-1.27	-0.92	8.39	8.13	2.73	0.06	7.62	6.22
% Chg Same Qtr Last Yr.....	3.17103	2.98	-1.46	-4.11	4.72	6.68	9.54	9.58	8.59	6.19	4.40	5.80	3.48	4.51	0.06	7.62	6.22
RENT, INTEREST, DIVIDENDS.....	29863.2	30433	30689	31156	31500	31545	31585	31891	32070	32546	32502	33843	32861	33686	30535	31630	32740
% Chg Prev Qtr SAAR.....	8.31599	7.85	3.40	6.23	4.49	0.58	0.50	3.94	2.27	6.06	-0.54	17.57	-11.12	10.43	2.00	3.59	3.51
% Chg Same Qtr Last Yr.....	-3.6327	1.41	4.10	6.43	5.48	3.66	2.92	2.36	1.81	3.17	2.90	6.12	2.46	3.50	2.00	3.59	3.51
TRANSFER PAYMENTS.....	48449.6	48681	49544	48164	48592	48954	47490	49391	48630	48776	48781	48958	49318	50015	48710	48607	48786
% Chg Prev Qtr SAAR.....	18.6757	1.93	7.28	-10.69	3.60	3.02	-11.44	17.00	-6.02	1.21	0.04	1.46	2.97	5.77	6.09	-0.21	0.37
% Chg Same Qtr Last Yr.....	7.72362	4.67	8.28	3.76	0.29	0.56	-4.15	2.55	0.08	-0.36	2.72	-0.88	1.42	2.54	6.09	-0.21	0.37
LESS: PERS CONT FOR SOC INS.....	17709.9	17754	17695	17746	16137	16073	16171	15973	16336	16314	16106	16404	18644	18763	17726	16088	16290
% Chg Prev Qtr SAAR.....	3.81259	0.99	-1.32	1.16	-31.63	-1.57	2.46	-4.79	9.39	-0.55	-5.00	7.62	66.86	2.58	0.42	-9.24	1.25
% Chg Same Qtr Last Yr.....	-0.3453	0.00	0.89	1.14	-8.88	-9.47	-8.61	-9.99	1.24	1.50	-0.40	2.69	14.13	15.01	0.42	-9.24	1.25
RESIDENCE ADJUSTMENT.....	-900.4	-896	-895	-930	-998	-976	-1041	-1091	-1314	-1393	-1398	-1550	-1427	-1457	-905	-1026	-1414
% Chg Prev Qtr SAAR.....	-19.291	-2.01	-0.52	16.77	32.42	-8.50	29.51	20.81	110.43	26.04	1.40	51.30	-28.14	8.79	-6.04	13.39	37.73
% Chg Same Qtr Last Yr.....	-10.111	-7.78	-3.86	-2.10	10.80	8.92	16.35	17.34	31.75	42.73	34.26	42.03	8.57	4.65	-6.04	13.39	37.73
PER CAPITA PERSONAL INCOME (\$):.....	34721.5	35014	35153	35091	35696	35714	35651	35857	36415	36519	36305	36932	36419	36737	34995	35729	36543
% Chg Prev Qtr SAAR.....	3.20199	3.41	1.60	-0.70	7.07	0.21	-0.71	2.33	6.38	1.15	-2.32	7.09	-5.45	3.54	1.34	2.10	2.28
% Chg Same Qtr Last Yr.....	-0.1824	1.06	2.64	1.86	2.81	2.00	1.42	2.18	2.01	2.25	1.84	3.00	0.01	0.60	1.34	2.10	2.28

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 4: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars)

January 2014

	Historical Data														Annual		
	2010:1	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2010	2011	2012
TN PERSONAL INCOME.....	222114	224595	226512	227678	233950	236853	238419	241251	247048	249071	249315	255322	253123	255937	225225	237618	250189
% Chg Prev Qtr SAAR.....	5.28	4.54	3.46	2.07	11.48	5.06	2.67	4.84	9.96	3.32	0.39	9.99	-3.40	4.52	3.79	5.50	5.29
% Chg Same Qtr Last Yr.....	2.81	3.66	4.86	3.83	5.33	5.46	5.26	5.96	5.60	5.16	4.57	5.83	2.46	2.76	3.79	5.50	5.29
WAGES AND SALARIES.....	109336	110921	111654	112934	114183	114941	116754	116235	120552	121408	121018	124450	124069	125057	111211	115529	121857
% Chg Prev Qtr SAAR.....	2.55	5.93	2.67	4.67	4.50	2.68	6.46	-1.77	15.70	2.87	-1.28	11.84	-1.22	3.22	3.01	3.88	5.48
% Chg Same Qtr Last Yr.....	1.20	2.81	4.09	3.94	4.43	3.62	4.57	2.92	5.58	5.63	3.65	7.07	2.92	3.01	3.01	3.88	5.48
OTHER LABOR INCOME.....	25840	25846	25885	26146	26735	26965	27407	27768	28651	29061	29181	29575	29777	29943	25929	27219	29117
% Chg Prev Qtr SAAR.....	5.31	0.11	0.59	4.10	9.32	3.49	6.72	5.37	13.34	5.84	1.66	5.52	2.75	2.24	0.59	4.97	6.97
% Chg Same Qtr Last Yr.....	-1.21	-0.20	1.31	2.50	3.46	4.33	5.88	6.21	7.17	7.77	6.47	6.51	3.93	3.03	0.59	4.97	6.97
PROPRIETORS INCOME.....	26471	26518	26284	26596	28189	28998	29593	29896	31346	31328	31387	32155	32878	33090	26467	29169	31554
% Chg Prev Qtr SAAR.....	-12.67	0.71	-3.48	4.83	26.20	11.98	8.46	4.16	20.85	-0.22	0.75	10.15	9.30	2.61	1.70	10.21	8.18
% Chg Same Qtr Last Yr.....	5.35	4.81	-0.04	-2.87	6.49	9.35	12.59	12.41	11.20	8.04	6.06	7.56	4.89	5.62	1.70	10.21	8.18
RENT, INTEREST, DIVIDENDS.....	30246	30858	31210	31854	32444	32787	33015	33447	33825	34417	34514	36084	35131	36003	31042	32923	34710
% Chg Prev Qtr SAAR.....	9.80	8.35	4.63	8.51	7.62	4.31	2.81	5.34	4.59	7.19	1.14	19.48	-10.16	10.30	3.70	6.06	5.43
% Chg Same Qtr Last Yr.....	-1.59	3.22	5.60	7.81	7.27	6.25	5.78	5.00	4.26	4.97	4.54	7.89	3.86	4.61	3.70	6.06	5.43
TRANSFER PAYMENTS.....	49071	49362	50385	49242	50047	50882	49641	51801	51291	51581	51802	52200	52726	53455	49515	50593	51719
% Chg Prev Qtr SAAR.....	20.30	2.39	8.56	-8.77	6.70	6.84	-9.41	18.58	-3.89	2.28	1.73	3.11	4.09	5.65	7.83	2.18	2.22
% Chg Same Qtr Last Yr.....	10.00	6.53	9.84	5.10	1.99	3.08	-1.48	5.20	2.48	1.37	4.35	0.77	2.80	3.63	7.83	2.18	2.22
LESS: PERS CONT FOR SOC INS.....	17937	18002	17995	18143	16620	16706	16903	16753	17230	17252	17103	17490	19932	20054	18019	16745	17269
% Chg Prev Qtr SAAR.....	5.24	1.45	-0.15	3.33	-29.59	2.08	4.81	-3.50	11.88	0.51	-3.40	9.37	68.67	2.46	2.09	-7.07	3.12
% Chg Same Qtr Last Yr.....	1.76	1.78	2.35	2.45	-7.34	-7.20	-6.07	-7.66	3.67	3.27	1.18	4.40	15.68	16.24	2.09	-7.07	3.12
RESIDENCE ADJUSTMENT.....	-912	-908	-910	-951	-1028	-1014	-1088	-1145	-1386	-1473	-1484	-1653	-1526	-1558	-920	-1069	-1499
% Chg Prev Qtr SAAR.....	-18.19	-1.56	0.66	19.28	36.39	-5.10	32.49	22.44	115.22	27.38	3.11	53.76	-27.37	8.67	-4.47	16.12	40.27
% Chg Same Qtr Last Yr.....	-8.21	-6.14	-2.48	-0.84	12.68	11.65	19.59	20.37	34.91	45.22	36.39	44.39	10.05	5.76	-4.47	16.12	40.27
PER CAPITA PERSONAL INCOME (\$).	35167	35503	35750	35877	36765	37121	37265	37606	38407	38618	38554	39378	38935	39264	35574	37189	38739
% Chg Prev Qtr SAAR.....	4.62	3.88	2.81	1.43	10.28	3.92	1.57	3.71	8.79	2.22	-0.67	8.83	-4.42	3.42	3.02	4.54	4.17
% Chg Same Qtr Last Yr.....	1.93	2.85	4.12	3.18	4.55	4.56	4.24	4.82	4.47	4.03	3.46	4.71	1.37	1.67	3.02	4.54	4.17

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 5: Tennessee Nonfarm Employment by Sector, Not Seasonally Adjusted (thousands of jobs)

January 2014

	Historical Data															Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012	
TOTAL NONFARM.....	2622.0	2618.3	2652.5	2609.2	2658.0	2666.5	2708.9	2670.7	2717.4	2712.7	2756.4	2720.4	2762.0	2752.8	2615.3	2660.6	2714.3	
% Chg Same Qtr Last Yr.....	0.08	0.80	1.14	1.60	1.37	1.84	2.13	2.36	2.24	1.73	1.75	1.86	1.64	1.48	-0.18	1.73	2.02	
NATURAL RESOURCES, MINING & CONSTRUCTION.....	106.2	108.7	107.4	100.2	108.9	113.2	112.4	105.6	109.6	111.6	110.1	105.0	109.8	110.4	105.1	108.7	109.2	
% Chg Same Qtr Last Yr.....	-3.89	-1.42	0.62	2.14	2.51	4.08	4.72	5.39	0.67	-1.41	-2.08	-0.63	0.18	-1.02	-4.32	3.39	0.51	
MANUFACTURING.....	299.3	300.6	300.3	300.7	304.0	305.6	307.5	307.5	313.7	316.0	316.7	316.6	320.1	322.3	298.9	304.4	313.5	
% Chg Same Qtr Last Yr.....	-2.91	-0.88	-0.06	1.73	1.56	1.66	2.40	2.26	3.21	3.41	2.98	2.98	2.04	1.99	-3.32	1.84	2.97	
DURABLE GOODS.....	176.1	177.9	178.5	180.0	182.7	185.1	187.1	188.8	194.0	196.3	197.1	197.7	200.0	201.9	176.3	183.7	194.1	
% Chg Same Qtr Last Yr.....	-2.55	0.41	1.56	4.21	3.75	4.05	4.82	4.89	6.20	6.09	5.33	4.68	3.11	2.84	-3.03	4.21	5.63	
NONDURABLE GOODS.....	123.2	122.7	121.8	120.6	121.3	120.5	120.4	118.6	119.7	119.7	119.6	119.0	120.1	120.4	122.6	120.7	119.4	
% Chg Same Qtr Last Yr.....	-3.42	-2.70	-2.33	-1.76	-1.57	-1.79	-1.15	-1.66	-1.29	-0.69	-0.66	0.28	0.31	0.61	-3.72	-1.57	-1.08	
TRADE, TRANSPORTATION, UTILITIES.....	552.4	555.1	566.8	551.5	561.7	563.7	577.3	564.8	572.7	573.9	588.7	575.3	581.9	583.7	555.1	563.5	575.0	
% Chg Same Qtr Last Yr.....	-0.88	0.20	1.10	1.02	1.68	1.55	1.84	2.41	1.97	1.81	1.97	1.85	1.60	1.70	-0.79	1.53	2.04	
WHOLESALE TRADE.....	117.2	116.7	116.5	116.0	118.0	118.5	119.0	118.9	120.9	121.4	121.6	118.7	119.2	120.1	116.8	117.9	120.7	
% Chg Same Qtr Last Yr.....	-3.49	-2.15	-1.61	-0.69	0.65	1.57	2.20	2.50	2.49	2.42	2.13	-0.17	-1.43	-1.02	-3.29	0.93	2.38	
RETAIL TRADE.....	305.9	305.6	314.2	303.3	308.2	308.4	316.8	307.3	312.0	311.5	322.2	315.2	320.7	322.0	306.7	309.2	313.3	
% Chg Same Qtr Last Yr.....	0.37	0.28	0.88	0.67	0.76	0.92	0.84	1.33	1.23	1.01	1.69	2.56	2.79	3.36	-0.10	0.80	1.32	
TRANSPORTATION & UTILITIES.....	129.3	132.8	136.2	132.2	135.5	136.8	141.4	138.6	139.8	141.0	144.9	141.4	142.0	141.6	131.5	136.5	141.1	
% Chg Same Qtr Last Yr.....	-1.37	2.15	4.08	3.39	4.80	2.99	3.84	4.81	3.20	3.09	2.48	2.02	1.57	0.38	-0.11	3.75	3.38	
INFORMATION.....	44.8	44.4	45.1	44.2	44.0	43.6	43.2	42.9	43.8	42.7	42.6	42.0	42.3	42.0	45.0	43.8	43.0	
% Chg Same Qtr Last Yr.....	-5.22	-3.48	-1.31	-3.43	-1.64	-1.80	-4.29	-2.79	-0.45	-2.14	-1.24	-2.10	-3.42	-1.64	-4.08	-2.80	-1.66	
FINANCIAL ACTIVITIES.....	138.3	136.9	135.6	134.7	136.6	137.3	137.5	136.8	138.1	138.2	137.5	138.5	139.3	140.1	137.1	136.5	137.6	
% Chg Same Qtr Last Yr.....	-2.08	-2.33	-2.68	-2.08	-1.23	0.32	1.35	1.51	1.05	0.66	0.00	1.24	0.89	1.35	-2.46	-0.42	0.80	
PROFESSIONAL & BUSINESS SERVICES.....	304.7	304.4	313.1	310.4	319.1	324.1	334.6	326.4	334.9	337.3	347.6	342.5	349.6	346.8	304.1	322.0	336.5	
% Chg Same Qtr Last Yr.....	4.73	5.51	4.31	5.51	4.74	6.48	6.87	5.16	4.96	4.07	3.89	4.95	4.37	2.81	3.44	5.91	4.51	
EDUCATION & HEALTH SERVICES.....	372.1	374.3	381.1	378.9	383.0	384.5	390.6	390.4	392.3	392.9	400.9	398.5	400.7	399.7	373.9	384.3	394.1	
% Chg Same Qtr Last Yr.....	1.88	2.20	2.88	2.89	2.94	2.74	2.51	3.04	2.41	2.17	2.62	2.07	2.15	1.74	2.18	2.77	2.56	
LEISURE & HOSPITALITY.....	268.5	269.0	260.7	253.2	273.3	275.9	268.1	262.6	283.9	284.5	277.8	272.5	295.9	297.8	262.0	267.6	277.2	
% Chg Same Qtr Last Yr.....	-0.95	-0.10	0.85	1.39	1.78	2.55	2.86	3.74	3.87	3.14	3.62	3.76	4.25	4.65	-0.57	2.15	3.59	
OTHER SERVICES.....	101.0	102.1	102.5	100.4	102.6	103.0	102.2	102.8	105.0	104.9	104.5	104.5	105.3	104.6	101.2	102.1	104.3	
% Chg Same Qtr Last Yr.....	-2.00	0.03	1.48	1.35	1.52	0.85	-0.33	2.32	2.40	1.84	2.22	1.65	0.22	-0.25	-0.80	0.84	2.20	
GOVERNMENT.....	434.7	422.8	439.9	435.1	424.8	415.6	435.5	431.0	423.4	410.7	430.1	425.1	417.1	405.4	432.9	427.8	423.8	
% Chg Same Qtr Last Yr.....	2.29	1.20	0.08	0.23	-2.28	-1.71	-1.01	-0.95	-0.35	-1.17	-1.23	-1.37	-1.49	-1.28	1.02	-1.19	-0.93	
FEDERAL, CIVILIAN.....	56.8	52.1	50.6	50.5	50.6	50.5	50.6	50.1	50.1	49.9	49.5	48.9	48.6	48.6	52.4	50.5	49.9	
% Chg Same Qtr Last Yr.....	11.52	4.83	0.33	0.87	-10.92	-3.01	0.07	-0.73	-0.92	-1.19	-2.11	-2.40	-2.99	-2.67	4.45	-3.49	-1.24	
STATE & LOCAL.....	377.9	370.7	389.4	384.6	374.2	365.1	384.9	380.9	373.2	360.8	380.6	376.2	368.4	356.9	380.5	377.2	373.9	
% Chg Same Qtr Last Yr.....	1.03	0.72	0.04	0.15	-0.98	-1.53	-1.15	-0.98	-0.27	-1.17	-1.12	-1.23	-1.29	-1.09	0.57	-0.87	-0.88	

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 6: Tennessee Durable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)

January 2014

	Historical Data														Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012
TOTAL DURABLE GOODS.....	176.1	177.9	178.5	180.0	182.7	185.1	187.1	188.8	194.0	196.3	197.1	197.7	200.0	201.9	176.3	183.7	194.1
% Chg Same Qtr Last Yr.....	-2.55	0.41	1.56	4.21	3.75	4.05	4.82	4.89	6.20	6.09	5.33	4.68	3.11	2.84	-3.03	4.21	5.63
WOOD PRODUCTS.....	10.9	11.1	10.9	10.4	10.8	11.0	10.9	10.8	11.1	11.3	11.0	10.7	10.8	10.8	10.9	10.8	11.1
% Chg Same Qtr Last Yr.....	-1.80	-1.78	-1.51	-2.80	-0.91	-0.90	0.31	3.19	2.46	3.34	0.91	-0.62	-2.70	-4.41	-3.54	-1.07	2.47
NONMETALLIC MINERAL PRODUCTS.....	11.5	11.5	11.4	11.3	11.8	12.0	12.1	12.1	12.5	12.6	12.6	12.5	12.7	12.8	11.3	11.8	12.5
% Chg Same Qtr Last Yr.....	-0.86	0.87	3.32	4.62	2.32	4.05	5.85	6.76	5.95	5.28	4.70	3.58	2.14	1.06	-2.02	4.20	5.65
PRIMARY METALS.....	8.7	8.9	9.0	9.1	9.2	9.2	9.4	9.4	9.6	9.8	9.9	10.1	10.2	10.2	8.8	9.2	9.7
% Chg Same Qtr Last Yr.....	-1.50	2.69	3.45	5.84	4.96	3.37	4.44	3.31	5.09	6.88	5.32	8.19	5.88	4.07	-2.67	4.64	5.16
FABRICATED METAL PRODUCTS.....	33.0	33.1	33.2	33.2	33.4	33.7	34.0	34.4	34.7	34.5	34.0	33.6	33.9	34.0	33.0	33.6	34.4
% Chg Same Qtr Last Yr.....	-1.00	0.92	1.42	2.26	1.11	2.02	2.31	3.41	3.90	2.37	-0.10	-2.23	-2.12	-1.54	-1.96	1.92	2.38
MACHINERY.....	25.0	24.9	24.8	25.2	25.5	25.1	24.6	25.4	26.1	25.5	24.8	25.2	25.8	25.4	24.8	25.1	25.5
% Chg Same Qtr Last Yr.....	-4.46	-0.93	-0.40	3.27	2.27	0.94	-0.54	0.66	2.35	1.73	0.54	-0.79	-1.28	-0.65	-4.84	1.48	1.33
COMPUTER & ELECTRONIC PRODUCTS.....	5.6	5.5	5.4	5.4	5.5	5.7	5.9	5.8	5.9	5.7	5.9	5.8	5.9	5.8	5.6	5.6	5.8
% Chg Same Qtr Last Yr.....	-10.58	-9.89	-7.43	-7.47	-2.96	3.66	9.26	8.07	7.32	0.59	0.00	0.57	0.00	2.34	-10.56	0.45	3.87
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	16.7	17.2	17.3	17.5	17.5	17.8	17.8	17.8	17.9	18.0	18.0	18.2	18.4	18.5	16.89	17.65	17.90
% Chg Same Qtr Last Yr.....	-6.36	0.19	2.37	6.72	4.99	3.49	2.89	1.72	2.09	0.94	0.94	2.44	2.79	2.78	-4.97	4.49	1.42
TRANSPORTATION EQUIPMENT.....	39.87	40.97	42.10	43.53	44.70	46.50	48.53	49.70	52.43	55.10	57.17	57.73	58.20	60.07	40.48	45.82	53.60
% Chg Same Qtr Last Yr.....	0.93	3.98	5.96	11.72	12.12	13.51	15.28	14.17	17.30	18.49	17.79	16.16	11.00	9.01	0.04	13.20	16.99
FURNITURE.....	9.83	9.73	9.30	9.27	8.97	8.83	8.67	8.60	8.87	8.80	8.73	8.77	8.90	9.07	9.68	8.93	8.75
% Chg Same Qtr Last Yr.....	-8.95	-6.71	-7.92	-6.08	-8.81	-9.25	-6.81	-7.19	-1.12	-0.38	0.77	1.94	0.38	3.03	-10.20	-7.75	-2.05
MISCELLANEOUS DURABLE GOODS.....	14.90	15.07	15.10	15.10	15.33	15.27	15.17	14.97	14.93	14.90	15.00	14.97	15.20	15.27	14.94	15.22	14.95
% Chg Same Qtr Last Yr.....	-1.76	1.57	2.26	2.72	2.91	1.33	0.44	-0.88	-2.61	-2.40	-1.10	0.00	1.79	2.46	-0.66	1.84	-1.75

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 7: Tennessee Nondurable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)

January 2014

	Historical Data														Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012
TOTAL NONDURABLE GOODS.....	123.2	122.7	121.8	120.6	121.3	120.5	120.4	118.6	119.7	119.7	119.6	119.0	120.1	120.4	122.6	120.7	119.4
% Chg Same Qtr Last Yr.....	-3.42	-2.70	-2.33	-1.76	-1.57	-1.79	-1.15	-1.66	-1.29	-0.69	-0.66	0.28	0.31	0.61	-3.72	-1.57	-1.08
FOOD.....	32.4	32.6	33.2	32.9	32.8	33.2	33.5	33.3	33.2	33.2	33.4	33.0	33.2	33.4	32.6	33.1	33.3
% Chg Same Qtr Last Yr.....	0.73	0.62	2.26	2.39	1.34	1.84	0.90	1.22	1.12	-0.20	-0.30	-1.00	0.10	0.70	0.80	1.61	0.45
BEVERAGE & TOBACCO.....	5.0	5.0	5.0	4.9	4.9	5.1	5.1	5.1	5.2	5.3	5.2	5.2	5.3	5.4	5.0	5.0	5.2
% Chg Same Qtr Last Yr.....	-1.96	-2.60	-0.67	-2.00	-1.33	1.33	2.68	4.08	4.73	4.61	1.96	1.96	3.23	1.89	-1.64	0.17	3.83
TEXTILE MILLS, TEXTILE MILL																	
PRODUCTS & APPAREL.....	11.9	11.3	10.9	10.5	10.7	10.8	10.7	10.6	10.7	10.8	10.9	10.7	10.7	10.7	11.5	10.7	10.8
% Chg Same Qtr Last Yr.....	-4.79	-9.14	-10.63	-12.04	-10.34	-3.85	-1.83	0.96	0.31	0.00	1.24	0.95	-0.31	-1.54	-8.36	-7.17	0.62
PAPER.....	15.6	15.9	15.8	15.3	15.4	15.5	15.0	14.5	14.8	14.9	14.5	14.2	14.2	14.3	15.7	15.3	14.7
% Chg Same Qtr Last Yr.....	-2.49	-2.65	-1.05	-1.08	-1.28	-2.73	-5.07	-5.23	-3.89	-3.88	-2.90	-2.30	-4.27	-4.04	-2.94	-2.55	-3.98
PRINTING & RELATED SUPPORT.....	11.8	11.4	10.5	10.2	10.0	9.8	9.8	9.6	9.6	9.5	9.4	9.0	8.9	8.7	11.4	9.9	9.5
% Chg Same Qtr Last Yr.....	-12.99	-10.70	-14.82	-14.80	-15.21	-14.04	-6.96	-5.90	-4.65	-3.40	-4.42	-5.92	-6.97	-8.45	-13.94	-12.91	-4.61
CHEMICALS.....	25.1	25.0	24.5	24.4	24.6	24.7	24.6	24.3	24.3	24.4	24.3	24.2	24.3	24.2	25.0	24.6	24.3
% Chg Same Qtr Last Yr.....	-2.71	-2.09	-3.92	-3.43	-2.12	-1.20	0.27	-0.55	-0.95	-1.08	-1.09	-0.41	-0.27	-0.68	-3.26	-1.64	-0.92
PLASTICS & RUBBER.....	19.7	20.0	20.5	20.9	21.1	19.8	20.1	19.6	20.1	19.9	20.2	20.1	19.9	20.0	19.9	20.5	19.9
% Chg Same Qtr Last Yr.....	-4.53	1.01	5.13	7.73	7.29	-1.17	-1.95	-6.38	-4.58	0.51	0.50	2.56	-0.99	0.67	-2.49	2.89	-2.57
MISCELLANEOUS NONDURABLE GOODS.....	1.7	1.5	1.4	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.8	2.7	3.5	3.8	1.6	1.7	1.8
% Chg Same Qtr Last Yr.....	-5.66	-11.54	-17.31	-6.00	2.00	8.70	16.28	10.64	3.92	6.00	6.00	55.77	100.00	113.21	-10.85	4.76	6.57

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 8: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

January 2014

	Historical Data															Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012	
TOTAL NONFARM.....	2618.6	2621.0	2628.7	2635.1	2652.8	2670.8	2684.7	2699.0	2713.1	2716.2	2731.6	2751.7	2758.3	2749.0	2615.3	2660.9	2715.0	
% Chg Prev Qtr SAAR.....	4.06	0.35	1.19	0.98	2.71	2.74	2.09	2.15	2.11	0.46	2.30	2.97	0.97	-1.34	-0.16	1.74	2.03	
% Chg Same Qtr Last Yr.....	0.07	0.88	1.23	1.64	1.30	1.90	2.13	2.42	2.27	1.70	1.75	1.95	1.67	1.21	-0.16	1.74	2.03	
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	106.2	106.1	106.1	104.2	108.8	110.5	111.0	110.1	109.6	108.8	109.1	108.7	109.9	107.4	105.1	108.6	109.4	
% Chg Prev Qtr SAAR.....	16.91	-0.25	0.00	-6.97	19.01	6.40	1.70	-3.32	-1.80	-2.77	1.23	-1.70	4.74	-8.90	-4.40	3.35	0.69	
% Chg Same Qtr Last Yr.....	-3.81	-1.42	0.63	2.06	2.51	4.18	4.62	5.63	0.67	-1.57	-1.68	-1.27	0.33	-1.29	-4.40	3.35	0.69	
MANUFACTURING.....	299.3	299.6	299.6	302.4	303.8	304.6	307.0	309.3	313.4	315.0	316.2	318.5	319.7	321.3	298.9	304.4	313.5	
% Chg Prev Qtr SAAR.....	2.83	0.34	0.01	3.83	1.84	0.99	3.19	3.06	5.49	1.96	1.61	2.88	1.52	2.11	-3.32	1.84	2.97	
% Chg Same Qtr Last Yr.....	-2.94	-0.89	-0.02	1.74	1.49	1.66	2.46	2.26	3.17	3.41	3.02	2.97	1.99	2.03	-3.32	1.84	2.97	
DURABLE GOODS.....	176.1	177.3	178.2	180.9	182.6	184.4	186.9	189.8	193.8	195.6	197.0	198.7	199.8	201.2	176.3	183.7	194.1	
% Chg Prev Qtr SAAR.....	6.10	2.69	2.08	6.17	3.77	4.08	5.56	6.26	8.75	3.79	2.76	3.55	2.25	2.83	-3.04	4.21	5.62	
% Chg Same Qtr Last Yr.....	-2.60	0.37	1.62	4.24	3.67	4.02	4.89	4.91	6.15	6.07	5.36	4.69	3.09	2.85	-3.04	4.21	5.62	
NONDURABLE GOODS.....	123.2	122.3	121.4	121.5	121.2	120.1	120.0	119.5	119.6	119.3	119.3	119.8	119.9	120.1	122.6	120.7	119.4	
% Chg Prev Qtr SAAR.....	-1.62	-2.95	-2.94	0.47	-0.98	-3.54	-0.38	-1.79	0.47	-0.96	-0.26	1.78	0.31	0.93	-3.73	-1.57	-1.08	
% Chg Same Qtr Last Yr.....	-3.43	-2.67	-2.33	-1.77	-1.61	-1.76	-1.12	-1.68	-1.32	-0.67	-0.64	0.25	0.21	0.69	-3.73	-1.57	-1.08	
TRADE, TRANSPORTATION, UTILITIES.....	553.5	556.2	558.7	557.7	562.7	564.9	569.0	572.0	574.0	574.5	580.5	583.3	581.5	583.0	555.0	563.6	575.3	
% Chg Prev Qtr SAAR.....	1.31	1.99	1.76	-0.67	3.61	1.55	2.98	2.10	1.43	0.30	4.27	1.94	-1.25	1.06	-0.74	1.54	2.07	
% Chg Same Qtr Last Yr.....	-0.91	0.28	1.24	1.09	1.66	1.55	1.86	2.56	2.01	1.70	2.02	1.98	1.29	1.49	-0.74	1.54	2.07	
WHOLESALE TRADE.....	116.9	116.3	116.2	116.8	117.7	118.3	118.8	119.7	120.6	121.2	121.4	119.9	118.8	119.2	116.8	117.9	120.7	
% Chg Prev Qtr SAAR.....	-2.47	-2.04	-0.46	2.20	3.12	1.94	1.70	3.06	3.16	1.78	0.66	-4.85	-3.51	1.35	-3.27	0.97	2.37	
% Chg Same Qtr Last Yr.....	-3.55	-2.10	-1.55	-0.71	0.68	1.69	2.24	2.45	2.46	2.42	2.16	0.14	-1.52	-1.62	-3.27	0.97	2.37	
RETAIL TRADE.....	307.0	307.0	307.9	307.5	309.2	309.7	310.6	312.4	313.0	312.4	316.3	320.4	320.2	322.6	306.7	309.3	313.5	
% Chg Prev Qtr SAAR.....	2.60	0.00	1.22	-0.52	2.14	0.69	1.21	2.25	0.81	-0.81	5.09	5.37	-0.33	3.07	-0.02	0.82	1.37	
% Chg Same Qtr Last Yr.....	0.30	0.37	1.14	0.82	0.71	0.88	0.88	1.57	1.24	0.86	1.81	2.58	2.29	3.28	-0.02	0.82	1.37	
TRANSPORTATION & UTILITIES.....	129.6	132.9	134.5	133.4	135.8	136.9	139.6	139.9	140.4	140.9	142.9	143.0	142.5	141.2	131.5	136.4	141.0	
% Chg Prev Qtr SAAR.....	1.77	10.69	5.01	-3.42	7.50	3.18	8.23	0.96	1.34	1.53	5.60	0.37	-1.39	-3.60	-0.11	3.73	3.39	
% Chg Same Qtr Last Yr.....	-1.32	2.23	4.05	3.39	4.81	2.98	3.77	4.92	3.39	2.97	2.34	2.19	1.50	0.19	-0.11	3.73	3.39	
INFORMATION.....	44.8	44.4	45.1	44.2	44.0	43.7	43.2	43.0	43.7	42.8	42.6	41.8	42.3	42.1	45.0	43.8	43.0	
% Chg Prev Qtr SAAR.....	-7.92	-2.95	5.82	-7.19	-2.09	-2.40	-5.08	-1.23	6.34	-7.70	-2.16	-7.30	5.20	-1.88	-4.09	-2.69	-1.69	
% Chg Same Qtr Last Yr.....	-5.29	-3.62	-1.10	-3.21	-1.71	-1.58	-4.22	-2.71	-0.68	-2.06	-1.31	-2.87	-3.13	-1.63	-4.09	-2.69	-1.69	
FINANCIAL ACTIVITIES.....	137.9	136.6	135.6	135.7	136.1	137.0	137.5	137.9	137.6	137.7	137.0	139.7	139.4	139.5	137.1	136.6	137.6	
% Chg Prev Qtr SAAR.....	-1.34	-3.81	-2.80	0.39	0.99	2.67	1.47	1.17	-0.68	0.19	-1.92	8.12	-0.95	0.38	-2.42	-0.40	0.73	
% Chg Same Qtr Last Yr.....	-2.06	-2.29	-2.59	-1.90	-1.33	0.29	1.38	1.57	1.15	0.54	-0.32	1.35	1.28	1.33	-2.42	-0.40	0.73	

(CONTINUED ON NEXT PAGE)

Table 8: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

January 2014

	Historical Data															Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012	
PROFESSIONAL & BUSINESS SERVICES.....	305.0	305.5	307.2	314.7	319.7	325.8	328.3	331.2	335.9	339.2	340.3	348.4	351.7	346.0	303.8	322.1	336.6	
% Chg Prev Qtr SAAR.....	10.27	0.66	2.24	10.08	6.60	7.81	3.10	3.62	5.76	3.95	1.30	9.87	3.88	-6.29	3.45	6.02	4.51	
% Chg Same Qtr Last Yr.....	4.70	5.65	4.41	5.72	4.83	6.64	6.87	5.26	5.06	4.10	3.65	5.17	4.70	2.02	3.45	6.02	4.51	
EDUCATION & HEALTH SERVICES.....	372.3	374.9	378.7	380.3	383.5	385.7	388.2	391.8	393.1	393.7	397.7	398.8	401.5	401.8	373.9	384.4	394.1	
% Chg Prev Qtr SAAR.....	2.88	2.82	4.19	1.63	3.41	2.35	2.65	3.73	1.33	0.61	4.13	1.08	2.77	0.30	2.23	2.82	2.51	
% Chg Same Qtr Last Yr.....	1.87	2.34	2.99	2.88	3.01	2.89	2.51	3.03	2.51	2.07	2.44	1.78	2.14	2.06	2.23	2.82	2.51	
LEISURE & HOSPITALITY.....	261.4	261.9	263.8	264.7	265.9	268.7	271.3	274.4	276.8	276.8	280.7	284.7	288.7	290.3	262.0	267.7	277.2	
% Chg Prev Qtr SAAR.....	0.77	0.82	2.88	1.32	1.93	4.28	3.93	4.55	3.55	0.10	5.71	5.87	5.64	2.24	-0.54	2.16	3.55	
% Chg Same Qtr Last Yr.....	-1.05	-0.01	0.96	1.44	1.73	2.60	2.86	3.66	4.07	3.01	3.45	3.78	4.30	4.85	-0.54	2.16	3.55	
OTHER SERVICES.....	100.3	101.5	102.9	101.4	101.8	102.5	102.5	103.7	104.3	104.5	104.3	106.0	104.6	104.1	101.2	102.0	104.2	
% Chg Prev Qtr SAAR.....	0.80	5.15	5.36	-5.71	1.59	2.78	0.26	4.63	2.33	0.64	-0.51	6.41	-4.94	-1.90	-0.81	0.84	2.12	
% Chg Same Qtr Last Yr.....	-2.02	-0.07	1.55	1.30	1.50	0.92	-0.32	2.30	2.49	1.95	1.76	2.19	0.32	-0.32	-0.81	0.84	2.12	
GOVERNMENT.....	438.0	434.2	431.1	429.8	426.5	427.5	426.6	425.6	424.6	423.2	423.2	421.9	419.0	413.4	433.2	427.6	424.2	
% Chg Prev Qtr SAAR.....	8.32	-3.45	-2.83	-1.17	-3.07	0.91	-0.78	-0.93	-0.94	-1.31	-0.06	-1.19	-2.69	-5.27	1.03	-1.29	-0.80	
% Chg Same Qtr Last Yr.....	2.30	1.30	0.12	0.11	-2.63	-1.55	-1.04	-0.98	-0.44	-0.99	-0.81	-0.88	-1.32	-2.32	1.03	-1.29	-0.80	
FEDERAL, CIVILIAN.....	58.1	53.0	50.2	49.8	50.1	51.2	50.2	49.6	49.8	49.6	52.2	50.6	46.5	45.2	52.7	50.3	50.3	
% Chg Prev Qtr SAAR.....	88.70	-31.09	-19.10	-3.66	2.71	8.79	-7.35	-4.70	1.90	-2.12	23.01	-11.94	-28.70	-10.73	4.87	-4.60	-0.02	
% Chg Same Qtr Last Yr.....	11.94	6.22	0.74	0.34	-13.82	-3.40	-0.07	-0.33	-0.53	-3.13	3.98	1.95	-6.76	-8.88	4.87	-4.60	-0.02	
STATE & LOCAL.....	379.9	381.2	380.9	380.1	376.4	376.3	376.4	376.0	374.8	373.7	371.0	371.3	372.6	368.2	380.4	377.3	373.9	
% Chg Prev Qtr SAAR.....	0.14	1.41	-0.38	-0.84	-3.80	-0.11	0.14	-0.42	-1.31	-1.20	-2.86	0.40	1.34	-4.57	0.52	-0.83	-0.91	
% Chg Same Qtr Last Yr.....	0.97	0.65	0.04	0.08	-0.92	-1.29	-1.16	-1.06	-0.43	-0.70	-1.45	-1.25	-0.60	-1.45	0.52	-0.83	-0.91	
STATISTICAL DISCREPANCY (%).....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	-0.01	

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 9: Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)

January 2014

	Historical Data															Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012	
TOTAL DURABLE GOODS.....	176.1	177.3	178.2	180.9	182.6	184.4	186.9	189.8	193.8	195.6	197.0	198.7	199.8	201.2	176.3	183.7	194.1	
% Chg Prev Qtr SAAR.....	6.10	2.69	2.08	6.17	3.77	4.08	5.56	6.26	8.75	3.79	2.76	3.55	2.25	2.83	-3.04	4.21	5.62	
% Chg Same Qtr Last Yr.....	-2.60	0.37	1.62	4.24	3.67	4.02	4.89	4.91	6.15	6.07	5.36	4.69	3.09	2.85	-3.04	4.21	5.62	
WOOD PRODUCTS.....	11.0	10.9	10.8	10.7	10.9	10.8	10.9	11.0	11.1	11.1	11.0	11.0	10.8	10.6	10.9	10.8	11.1	
% Chg Prev Qtr SAAR.....	-0.37	-3.21	-2.33	-4.90	6.54	-2.85	3.51	6.12	2.61	1.19	-5.49	-0.57	-6.08	-5.33	-3.55	-1.08	2.47	
% Chg Same Qtr Last Yr.....	-1.93	-1.91	-1.34	-2.72	-1.07	-0.98	0.47	3.26	2.29	3.34	1.02	-0.61	-2.78	-4.39	-3.55	-1.08	2.47	
NONMETALLIC MINERALS.....	11.5	11.4	11.4	11.5	11.7	11.9	12.1	12.3	12.4	12.5	12.7	12.7	12.7	12.6	11.3	11.8	12.5	
% Chg Prev Qtr SAAR.....	17.21	-1.57	-0.51	4.31	6.94	5.55	7.07	7.34	3.56	3.32	4.91	2.36	-2.04	-0.67	-2.05	4.20	5.66	
% Chg Same Qtr Last Yr.....	-0.92	0.83	3.43	4.61	2.24	4.04	5.96	6.72	5.87	5.31	4.77	3.53	2.10	1.10	-2.05	4.20	5.66	
PRIMARY METALS.....	8.8	8.9	8.9	9.1	9.2	9.2	9.3	9.4	9.6	9.8	9.8	10.2	10.2	10.2	8.8	9.2	9.7	
% Chg Prev Qtr SAAR.....	8.64	6.59	0.63	8.16	3.99	0.68	5.66	3.07	10.69	8.22	0.07	14.25	1.34	1.24	-2.68	4.65	5.16	
% Chg Same Qtr Last Yr.....	-1.60	2.66	3.50	5.96	4.80	3.32	4.59	3.33	4.96	6.87	5.43	8.18	5.82	4.07	-2.68	4.65	5.16	
FABRICATED METALS.....	33.0	33.0	33.1	33.4	33.4	33.7	34.0	34.5	34.6	34.4	34.0	33.7	33.9	33.9	33.0	33.6	34.4	
% Chg Prev Qtr SAAR.....	4.46	-0.34	1.63	2.82	-0.07	3.51	4.00	6.09	1.52	-2.12	-4.98	-3.25	1.81	0.34	-1.95	1.91	2.36	
% Chg Same Qtr Last Yr.....	-1.16	0.92	1.68	2.13	1.00	1.97	2.56	3.36	3.77	2.33	0.04	-2.24	-2.17	-1.56	-1.95	1.91	2.36	
MACHINERY.....	24.7	24.9	25.1	25.2	25.2	25.1	25.0	25.4	25.7	25.5	25.2	25.2	25.4	25.4	24.8	25.1	25.5	
% Chg Prev Qtr SAAR.....	5.50	3.24	4.11	0.99	-0.15	-1.32	-1.05	5.75	5.39	-2.95	-5.08	-0.04	2.67	0.06	-4.80	1.48	1.32	
% Chg Same Qtr Last Yr.....	-4.61	-0.99	-0.31	3.45	2.03	0.89	-0.39	0.77	2.14	1.71	0.66	-0.75	-1.39	-0.64	-4.80	1.48	1.32	
COMPUTERS & ELECTRONICS.....	5.6	5.5	5.4	5.4	5.5	5.7	5.9	5.8	5.9	5.7	5.8	5.8	5.9	5.9	5.6	5.6	5.8	
% Chg Prev Qtr SAAR.....	-10.48	-10.53	-7.93	-0.24	7.63	17.89	11.28	-2.89	4.04	-8.53	7.49	0.40	1.15	0.74	-10.58	0.43	3.89	
% Chg Same Qtr Last Yr.....	-10.58	-9.73	-7.63	-7.39	-3.02	3.90	8.94	8.21	7.30	0.70	-0.17	0.67	-0.04	2.41	-10.58	0.43	3.89	
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	16.8	17.1	17.2	17.5	17.6	17.7	17.8	17.8	17.9	17.9	18.0	18.3	18.4	18.4	16.9	17.7	17.9	
% Chg Prev Qtr SAAR.....	9.45	8.41	2.79	6.51	1.73	2.88	1.18	1.06	2.71	-1.03	1.29	7.04	3.74	-0.71	-4.99	4.50	1.41	
% Chg Same Qtr Last Yr.....	-6.41	0.12	2.51	6.76	4.83	3.46	3.05	1.71	1.95	0.97	1.00	2.46	2.72	2.80	-4.99	4.50	1.41	
TRANSPORTATION EQUIPMENT.....	40.1	40.9	41.8	43.7	44.9	46.4	48.2	49.9	52.8	54.9	56.8	57.9	58.6	59.9	40.5	45.8	53.6	
% Chg Prev Qtr SAAR.....	11.11	8.82	9.18	18.70	12.28	13.61	16.45	14.60	25.18	17.69	14.01	8.51	4.23	9.45	0.03	13.20	17.00	
% Chg Same Qtr Last Yr.....	1.02	3.86	5.85	11.88	12.18	13.39	15.23	14.22	17.37	18.41	17.79	16.19	10.99	8.99	0.03	13.20	17.00	
FURNITURE.....	9.9	9.7	9.3	9.3	9.0	8.8	8.7	8.6	8.9	8.7	8.8	8.8	8.9	9.0	9.7	8.9	8.8	
% Chg Prev Qtr SAAR.....	-2.02	-8.04	-13.88	0.39	-13.45	-9.36	-3.82	-1.66	10.96	-5.95	0.67	2.75	4.10	4.76	-10.21	-7.74	-2.07	
% Chg Same Qtr Last Yr.....	-8.98	-6.77	-7.82	-6.05	-8.92	-9.25	-6.71	-7.19	-1.24	-0.32	0.82	1.93	0.32	3.06	-10.21	-7.74	-2.07	
MISCELLANEOUS DURABLES.....	14.9	15.0	15.1	15.2	15.3	15.2	15.1	15.1	14.9	14.9	15.0	15.0	15.2	15.2	14.9	15.2	15.0	
% Chg Prev Qtr SAAR.....	2.12	4.33	0.92	3.26	3.00	-1.59	-2.64	-2.32	-3.99	-0.56	2.73	1.88	3.08	2.20	-0.67	1.83	-1.75	
% Chg Same Qtr Last Yr.....	-1.79	1.63	2.32	2.65	2.87	1.38	0.47	-0.91	-2.64	-2.38	-1.06	-0.02	1.77	2.47	-0.67	1.83	-1.75	

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 10: Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)

January 2014

	Historical Data														Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012
TOTAL NONDURABLE GOODS.....	123.2	122.3	121.4	121.5	121.2	120.1	120.0	119.5	119.6	119.3	119.3	119.8	119.9	120.1	122.6	120.7	119.4
% Chg Prev Qtr SAAR.....	-1.68	-2.93	-2.93	0.50	-1.06	-3.50	-0.36	-1.75	0.37	-0.91	-0.24	1.81	0.31	0.93	-3.73	-1.57	-1.08
% Chg Same Qtr Last Yr.....	-3.43	-2.67	-2.33	-1.77	-1.62	-1.76	-1.12	-1.68	-1.32	-0.67	-0.64	0.25	0.21	0.69	-3.73	-1.57	-1.08
FOOD.....	32.5	32.6	32.9	33.0	33.0	33.2	33.2	33.4	33.3	33.2	33.1	33.1	33.4	33.4	32.6	33.1	33.3
% Chg Prev Qtr SAAR.....	3.66	0.75	4.00	1.24	-0.73	3.05	0.08	2.49	-1.14	-2.12	-0.32	-0.49	3.32	0.50	0.80	1.62	0.46
% Chg Same Qtr Last Yr.....	0.75	0.59	2.26	2.40	1.30	1.87	0.90	1.21	1.11	-0.19	-0.29	-1.02	0.10	0.73	0.80	1.62	0.46
BEVERAGE & TOBACCO.....	5.0	5.0	5.0	4.9	4.9	5.0	5.1	5.1	5.2	5.3	5.2	5.2	5.3	5.4	5.0	5.0	5.2
% Chg Prev Qtr SAAR.....	-2.25	-3.38	1.57	-3.50	0.46	6.83	6.95	2.48	3.02	5.96	-3.71	3.07	7.53	1.14	-1.64	0.17	3.84
% Chg Same Qtr Last Yr.....	-1.77	-2.67	-0.82	-1.91	-1.24	1.27	2.59	4.14	4.80	4.58	1.87	2.02	3.23	1.88	-1.64	0.17	3.84
TEXTILE MILLS, TEXTILE MILL																	
PRODUCTS & APPAREL.....	11.9	11.2	10.9	10.6	10.7	10.7	10.7	10.7	10.7	10.7	10.8	10.8	10.7	10.6	11.5	10.7	10.8
% Chg Prev Qtr SAAR.....	-5.98	-22.71	-9.45	-9.06	1.66	1.89	-1.19	1.37	-0.67	0.42	4.00	0.06	-5.52	-4.03	-8.35	-7.20	0.62
% Chg Same Qtr Last Yr.....	-4.77	-9.24	-10.57	-12.05	-10.31	-3.90	-1.78	0.92	0.34	-0.02	1.27	0.94	-0.32	-1.54	-8.35	-7.20	0.62
PAPER.....	15.7	15.6	15.7	15.6	15.4	15.2	14.9	14.8	14.8	14.6	14.5	14.4	14.2	14.0	15.7	15.3	14.7
% Chg Prev Qtr SAAR.....	-2.10	0.00	2.00	-3.76	-3.35	-5.71	-7.43	-4.21	2.02	-5.75	-3.42	-1.81	-6.08	-4.81	-2.95	-2.53	-3.98
% Chg Same Qtr Last Yr.....	-2.48	-2.69	-1.08	-0.99	-1.31	-2.75	-5.08	-5.19	-3.90	-3.91	-2.88	-2.28	-4.29	-4.05	-2.95	-2.53	-3.98
PRINTING & RELATED SUPPORT.....	11.8	11.4	10.5	10.3	10.0	9.8	9.7	9.7	9.5	9.5	9.3	9.1	8.9	8.7	11.4	10.0	9.5
% Chg Prev Qtr SAAR.....	-8.02	-13.06	-28.49	-7.93	-10.02	-7.55	-2.19	-3.58	-5.26	-2.64	-6.09	-9.53	-9.40	-8.71	-13.96	-12.93	-4.61
% Chg Same Qtr Last Yr.....	-13.14	-10.53	-14.82	-14.82	-15.29	-13.98	-6.97	-5.89	-4.67	-3.42	-4.40	-5.91	-6.97	-8.47	-13.96	-12.93	-4.61
CHEMICALS.....	25.1	24.9	24.5	24.5	24.6	24.6	24.5	24.4	24.3	24.3	24.3	24.3	24.3	24.2	25.0	24.6	24.3
% Chg Prev Qtr SAAR.....	-3.94	-3.00	-7.23	0.81	1.19	0.47	-1.29	-2.41	-0.60	-0.10	-1.20	0.35	-0.38	-1.77	-3.26	-1.63	-0.92
% Chg Same Qtr Last Yr.....	-2.66	-2.16	-3.93	-3.38	-2.12	-1.25	0.29	-0.52	-0.96	-1.10	-1.08	-0.39	-0.29	-0.71	-3.26	-1.63	-0.92
PLASTICS & RUBBER.....	19.6	20.0	20.4	21.0	21.0	19.8	20.1	19.7	20.0	20.0	20.2	20.2	19.8	20.1	19.9	20.5	19.9
% Chg Prev Qtr SAAR.....	0.51	10.14	8.28	11.96	-1.25	-19.72	4.40	-7.53	6.35	-0.06	4.05	-0.25	-6.62	6.13	-2.50	2.90	-2.57
% Chg Same Qtr Last Yr.....	-4.60	1.24	5.10	7.63	7.16	-0.99	-1.89	-6.47	-4.72	0.65	0.56	2.48	-1.04	0.76	-2.50	2.90	-2.57
MISCELLANEOUS NONDURABLE GOODS.....	1.6	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.8	1.8	2.7	3.4	3.9	1.6	1.7	1.8
% Chg Prev Qtr SAAR.....	-8.79	-16.22	-17.51	23.05	22.14	14.36	10.07	-3.65	-6.19	27.95	11.24	338.05	150.94	76.86	-10.93	4.92	6.53
% Chg Same Qtr Last Yr.....	-6.66	-11.17	-16.60	-6.15	0.96	9.12	17.28	10.32	3.28	6.22	6.50	55.51	99.30	113.97	-10.93	4.92	6.53

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 11: Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (2009 dollars)

January 2014

	Historical Data														Annual		
	2010:1	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2010	2011	2012
TOTAL NONFARM.....	41637	41334	41548	41274	42131	41265	41559	40592	42476	41934	41697	42037	42349	42055	41449	41387	42036
% Chg Same Qtr Last Yr.....	1.899	0.98	1.86	1.53	1.19	-0.17	0.03	-1.65	0.82	1.62	0.33	3.56	-0.30	0.29	1.57	-0.15	1.57
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	47827	45806	44630	43682	48346	46376	44595	43411	49447	45747	43783	45184	47078	45325	45486	45682	46040
% Chg Same Qtr Last Yr.....	1.1331	3.08	2.53	1.69	1.09	1.24	-0.08	-0.62	2.28	-1.35	-1.82	4.08	-4.79	-0.92	2.09	0.43	0.78
MANUFACTURING.....	51003	50990	51103	51717	52291	50069	51014	49749	51892	53153	49885	51973	51516	51499	51203	50781	51726
% Chg Same Qtr Last Yr.....	10.137	3.12	4.67	1.23	2.53	-1.81	-0.17	-3.81	-0.76	6.16	-2.21	4.47	-0.73	-3.11	4.67	-0.83	1.86
DURABLE GOODS.....	50258	50759	50447	49890	51160	48817	49704	49159	51449	53864	48812	51093	49845	49839	50339	49710	51305
% Chg Same Qtr Last Yr.....	8.6308	4.84	5.37	-1.01	1.79	-3.83	-1.47	-1.46	0.57	10.34	-1.79	3.93	-3.12	-7.47	4.35	-1.25	3.21
NONDURABLE GOODS.....	52050	51319	52054	54395	53979	51954	53026	50664	52598	52002	51644	53421	54292	54263	52455	52406	52416
% Chg Same Qtr Last Yr.....	12.244	0.81	3.78	4.48	3.71	1.24	1.87	-6.86	-2.56	0.09	-2.61	5.44	3.22	4.35	5.17	-0.09	0.02
TRADE, TRANSPORTATION, UTILITIES.....	37898	38687	38736	37751	39035	38567	38818	37887	39303	38880	38391	38731	38838	38692	38268	38577	38826
% Chg Same Qtr Last Yr.....	-0.7469	1.87	3.36	0.49	3.00	-0.31	0.21	0.36	0.69	0.81	-1.10	2.23	-1.18	-0.48	1.24	0.81	0.65
WHOLESALE TRADE.....	55972	56333	58246	57063	57750	57098	57509	57302	58549	57716	56883	61926	59569	59995	56904	57415	58769
% Chg Same Qtr Last Yr.....	-0.4518	0.77	4.42	2.25	3.18	1.36	-1.27	0.42	1.38	1.08	-1.09	8.07	1.74	3.95	1.74	0.90	2.36
RETAIL TRADE.....	26417	27715	26916	26318	27256	26622	27412	26578	27495	27051	26485	25945	26282	25984	26842	26967	26744
% Chg Same Qtr Last Yr.....	-0.4389	4.73	2.21	0.38	3.18	-3.94	1.84	0.99	0.88	1.61	-3.38	-2.38	-4.41	-3.94	1.72	0.47	-0.83
TRANSPORTATION & UTILITIES.....	48441	48646	48792	47614	49642	49601	48341	46882	48982	48985	48775	47702	49430	49511	48374	48616	48611
% Chg Same Qtr Last Yr.....	0.6218	1.08	4.26	-0.96	2.48	1.96	-0.93	-1.54	-1.33	-1.24	0.90	1.75	0.91	1.07	1.23	0.50	-0.01
INFORMATION.....	53761	52241	53129	50419	54732	54483	54125	53620	55735	54966	55341	55756	56442	56719	52388	54240	55450
% Chg Same Qtr Last Yr.....	5.5683	1.60	1.04	-0.95	1.81	4.29	1.87	6.35	1.83	0.89	2.25	3.98	1.27	3.19	1.81	3.54	2.23
FINANCIAL ACTIVITIES.....	56784	59146	61207	64359	61082	58778	60595	61063	61240	65093	61817	64883	62278	62565	60374	60379	63258
% Chg Same Qtr Last Yr.....	-0.2268	3.63	6.14	11.07	7.57	-0.62	-1.00	-5.12	0.26	10.74	2.02	6.26	1.70	-3.88	5.18	0.01	4.77
PROFESSIONAL & BUSINESS SERVICES.....	48254	46671	46683	45993	47714	46574	46052	44822	49422	47666	48852	49944	50320	50047	46900	46290	48971
% Chg Same Qtr Last Yr.....	4.6796	-0.23	-0.42	1.96	-1.12	-0.21	-1.35	-2.55	3.58	2.35	6.08	11.43	1.82	4.99	1.48	-1.30	5.79
EDUCATION & HEALTH SERVICES.....	44058	43419	43279	43386	43218	43405	43368	41762	43568	42371	43109	42141	43788	43798	43536	42938	42797
% Chg Same Qtr Last Yr.....	0.5706	-0.55	-0.84	-0.16	-1.91	-0.03	0.20	-3.74	0.81	-2.38	-0.60	0.91	0.51	3.37	-0.24	-1.37	-0.33
LEISURE & HOSPITALITY.....	20784	19562	19452	20588	20833	19305	19921	19976	21186	19689	19452	20348	20114	18778	20096	20009	20169
% Chg Same Qtr Last Yr.....	1.6971	1.54	1.12	4.04	0.23	-1.31	2.42	-2.97	1.70	1.99	-2.36	1.86	-5.06	-4.63	2.11	-0.44	0.80
OTHER SERVICES.....	37198	36736	37661	36417	38524	36489	36989	37351	37567	37896	36904	36961	37021	36946	37003	37338	37332
% Chg Same Qtr Last Yr.....	1.0639	0.08	2.50	-3.73	3.56	-0.67	-1.78	2.57	-2.49	3.86	-0.23	-1.05	-1.45	-2.51	-0.05	0.91	-0.02
GOVERNMENT.....	38955	39162	39843	38244	38754	39587	40208	38387	38825	38842	40668	38537	39010	39728	39051	39234	39218
% Chg Same Qtr Last Yr.....	-0.5508	-1.33	-0.01	1.00	-0.52	1.09	0.92	0.37	0.18	-1.88	1.15	0.39	0.48	2.28	-0.24	0.47	-0.04
FEDERAL, CIVILIAN.....	66568	61448	66534	68672	68585	67790	67624	67920	68101	67475	67086	66868	67039	67121	65806	67980	67382
% Chg Same Qtr Last Yr.....	2.9841	-2.92	4.03	6.43	3.03	10.32	1.64	-1.10	-0.70	-0.46	-0.80	-1.55	-1.56	-0.52	2.66	3.30	-0.88
STATE & LOCAL.....	35358	35812	36094	34293	34840	35774	36415	34505	34974	34996	37014	34850	35367	36112	35389	35383	35459
% Chg Same Qtr Last Yr.....	-1.4273	-1.81	-1.37	-0.35	-1.47	-0.11	0.89	0.62	0.39	-2.17	1.65	1.00	1.12	3.19	-1.25	-0.02	0.21

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 12: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)

January 2014

	Historical Data														Annual		
	2010:1	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2010	2011	2012
TOTAL NONFARM.....	41245	41388	41506	41647	41717	41346	41491	40958	42031	42002	41644	42418	41867	42110	41447	41378	42024
% Chg Prev Qtr SAAR.....	1.85	1.40	1.15	1.37	0.67	-3.51	1.41	-5.04	10.89	-0.28	-3.36	7.65	-5.09	2.34	1.54	-0.16	1.56
% Chg Same Qtr Last Yr.....	1.93	1.00	1.78	1.44	1.15	-0.10	-0.04	-1.65	0.75	1.59	0.37	3.56	-0.39	0.26	1.54	-0.16	1.56
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	45969	45820	45737	44204	46506	46390	45658	43971	47455	45761	44897	45584	45475	45270	45433	45631	45924
% Chg Prev Qtr SAAR.....	25.03	-1.29	-0.72	-12.75	22.51	-0.99	-6.17	-13.97	35.66	-13.53	-7.35	6.27	-0.95	-1.79	2.07	0.44	0.64
% Chg Same Qtr Last Yr.....	1.08	2.98	2.53	1.68	1.17	1.24	-0.17	-0.53	2.04	-1.36	-1.67	3.67	-4.17	-1.07	2.07	0.44	0.64
MANUFACTURING.....	50713	50983	51270	51839	51986	50095	51183	49837	51589	53204	50050	52047	51219	51574	51201	50775	51723
% Chg Prev Qtr SAAR.....	-3.96	2.15	2.26	4.51	1.15	-13.78	8.98	-10.11	14.82	13.12	-21.69	16.94	-6.21	2.80	4.66	-0.83	1.87
% Chg Same Qtr Last Yr.....	10.09	3.15	4.68	1.19	2.51	-1.74	-0.17	-3.86	-0.76	6.21	-2.21	4.43	-0.72	-3.06	4.66	-0.83	1.87
DURABLE GOODS.....	50032	50739	50605	49967	50911	48836	49876	49201	51187	53914	48988	51119	49588	49898	50336	49706	51302
% Chg Prev Qtr SAAR.....	-3.73	5.77	-1.05	-4.95	7.77	-15.33	8.79	-5.30	17.15	23.07	-31.84	18.57	-11.45	2.52	4.34	-1.25	3.21
% Chg Same Qtr Last Yr.....	8.56	4.90	5.42	-1.07	1.76	-3.75	-1.44	-1.53	0.54	10.40	-1.78	3.90	-3.12	-7.45	4.34	-1.25	3.21
NONDURABLE GOODS.....	51669	51333	52233	54587	53588	51991	53190	50827	52228	52054	51791	53578	53925	54368	52455	52399	52413
% Chg Prev Qtr SAAR.....	-4.33	-2.58	7.20	19.29	-7.12	-11.40	9.55	-16.62	11.49	-1.32	-2.00	14.53	2.61	3.33	5.15	-0.11	0.03
% Chg Same Qtr Last Yr.....	12.25	0.81	3.75	4.48	3.71	1.28	1.83	-6.89	-2.54	0.12	-2.63	5.41	3.25	4.45	5.15	-0.11	0.03
TRADE, TRANSPORTATION, UTILITIES.....	37502	38608	38657	38303	38599	38496	38738	38435	38809	38791	38353	39276	38303	38721	38267	38567	38807
% Chg Prev Qtr SAAR.....	-6.82	12.33	0.51	-3.61	3.13	-1.06	2.53	-3.09	3.95	-0.18	-4.44	9.98	-9.55	4.43	1.18	0.78	0.62
% Chg Same Qtr Last Yr.....	-0.80	1.91	3.28	0.35	2.93	-0.29	0.21	0.34	0.54	0.77	-0.99	2.19	-1.30	-0.18	1.18	0.78	0.62
WHOLESALE TRADE.....	55544	56478	58413	57194	57321	57227	57606	57414	58142	57859	56977	62028	58973	60197	56907	57392	58752
% Chg Prev Qtr SAAR.....	-2.98	6.89	14.43	-8.09	0.90	-0.66	2.68	-1.32	5.16	-1.93	-5.96	40.46	-18.29	8.56	1.73	0.85	2.37
% Chg Same Qtr Last Yr.....	-0.50	0.83	4.37	2.19	3.20	1.33	-1.38	0.39	1.43	1.10	-1.09	8.04	1.43	4.04	1.73	0.85	2.37
RETAIL TRADE.....	26091	27612	26794	26854	26881	26539	27297	27108	27052	26964	26411	26432	25853	26027	26838	26956	26715
% Chg Prev Qtr SAAR.....	-10.45	25.45	-11.35	0.90	0.40	-4.99	11.92	-2.74	-0.82	-1.29	-7.95	0.31	-8.48	2.72	1.63	0.44	-0.89
% Chg Same Qtr Last Yr.....	-0.51	4.80	2.12	0.12	3.03	-3.89	1.88	0.95	0.64	1.60	-3.24	-2.49	-4.43	-3.48	1.63	0.44	-0.89
TRANSPORTATION & UTILITIES.....	48028	48534	48768	48192	49220	49479	48317	47487	48515	48775	48809	48381	48876	49337	48380	48626	48620
% Chg Prev Qtr SAAR.....	-4.99	4.28	1.94	-4.63	8.80	2.12	-9.07	-6.70	8.94	2.17	0.28	-3.46	4.16	3.83	1.19	0.51	-0.01
% Chg Same Qtr Last Yr.....	0.60	1.03	4.18	-0.93	2.48	1.95	-0.92	-1.46	-1.43	-1.42	1.02	1.88	0.75	1.15	1.19	0.51	-0.01
INFORMATION.....	53800	52241	53129	50457	54650	54524	54001	53620	55606	55134	55169	55799	56757	56719	52407	54199	55427
% Chg Prev Qtr SAAR.....	23.31	-11.09	6.97	-18.65	37.62	-0.92	-3.78	-2.79	15.66	-3.35	0.25	4.65	7.05	-0.27	1.81	3.42	2.27
% Chg Same Qtr Last Yr.....	5.57	1.67	1.18	-1.17	1.58	4.37	1.64	6.27	1.75	1.12	2.16	4.06	2.07	2.87	1.81	3.42	2.27
FINANCIAL ACTIVITIES.....	56470	59332	61356	64375	60632	59023	60757	61063	60751	65298	62056	65088	61713	62520	60383	60369	63298
% Chg Prev Qtr SAAR.....	-10.23	21.87	14.36	21.18	-21.31	-10.20	12.28	2.03	-2.03	33.47	-18.43	21.02	-19.18	5.33	5.14	-0.02	4.85
% Chg Same Qtr Last Yr.....	-0.24	3.61	6.09	10.96	7.37	-0.52	-0.98	-5.15	0.20	10.63	2.14	6.59	1.58	-4.25	5.14	-0.02	4.85

(CONTINUED ON NEXT PAGE)

Table 12: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)

January 2014

	Historical Data														Annual		
	2010:1	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2010	2011	2012
PROFESSIONAL & BUSINESS SERVICES.....	47692	46620	46510	46872	47062	46481	45812	45678	48696	47529	48583	51016	49477	49743	46923	46258	48956
% Chg Prev Qtr SAAR.....	15.39	-8.70	-0.94	3.15	1.63	-4.84	-5.64	-1.17	29.17	-9.25	9.18	21.58	-11.53	2.17	1.46	-1.42	5.83
% Chg Same Qtr Last Yr.....	4.81	-0.20	-0.55	1.86	-1.32	-0.30	-1.50	-2.55	3.47	2.25	6.05	11.69	1.60	4.66	1.46	-1.42	5.83
EDUCATION & HEALTH SERVICES.....	43891	43399	43210	43653	43059	43356	43237	42020	43408	42281	43018	42477	43755	43711	43538	42918	42796
% Chg Prev Qtr SAAR.....	1.11	-4.41	-1.73	4.16	-5.34	2.79	-1.09	-10.79	13.89	-9.99	7.16	-4.93	12.59	-0.40	-0.29	-1.43	-0.28
% Chg Same Qtr Last Yr.....	0.60	-0.54	-0.97	-0.27	-1.90	-0.10	0.06	-3.74	0.81	-2.48	-0.51	1.09	0.80	3.38	-0.29	-1.43	-0.28
LEISURE & HOSPITALITY.....	19892	20096	19976	20343	19928	19840	20450	19741	20280	20194	19993	20141	19250	19250	20077	19990	20152
% Chg Prev Qtr SAAR.....	6.66	4.16	-2.36	7.55	-7.92	-1.76	12.89	-13.17	11.38	-1.69	-3.93	2.99	-16.56	0.02	2.05	-0.43	0.81
% Chg Same Qtr Last Yr.....	1.60	1.64	1.03	3.93	0.18	-1.27	2.37	-2.96	1.77	1.79	-2.24	2.02	-5.08	-4.67	2.05	-0.43	0.81
OTHER SERVICES.....	36839	37017	37884	36299	38169	36776	37182	37230	37228	38163	37057	37008	36497	37170	37010	37339	37364
% Chg Prev Qtr SAAR.....	-9.12	1.95	9.70	-15.71	22.26	-13.82	4.49	0.52	-0.02	10.42	-11.10	-0.53	-5.41	7.58	-0.04	0.89	0.07
% Chg Same Qtr Last Yr.....	1.04	0.10	2.60	-3.79	3.61	-0.65	-1.85	2.57	-2.46	3.77	-0.34	-0.60	-1.97	-2.60	-0.04	0.89	0.07
GOVERNMENT.....	39385	38867	38797	39028	39229	39432	39088	39185	39312	38726	39464	39171	39303	39542	39019	39234	39168
% Chg Prev Qtr SAAR.....	7.74	-5.16	-0.72	2.40	2.07	2.10	-3.45	0.99	1.30	-5.83	7.84	-2.93	1.35	2.45	-0.23	0.55	-0.17
% Chg Same Qtr Last Yr.....	-0.42	-1.34	-0.10	0.96	-0.40	1.46	0.75	0.40	0.21	-1.79	0.96	-0.04	-0.02	2.11	-0.23	0.55	-0.17
FEDERAL, CIVILIAN.....	67149	60039	65404	69128	69549	68466	66742	68462	68788	67881	67537	63452	64829	70251	65430	68305	66914
% Chg Prev Qtr SAAR.....	12.43	-36.09	40.83	24.80	2.46	-6.08	-9.70	10.71	1.92	-5.17	-2.01	-22.09	8.97	37.89	2.35	4.39	-2.04
% Chg Same Qtr Last Yr.....	3.74	-3.28	2.68	6.01	3.57	14.04	2.05	-0.96	-1.09	-0.85	1.19	-7.32	-5.75	3.49	2.35	4.39	-2.04
STATE & LOCAL.....	35759	35627	35100	35058	35258	35568	35328	35281	35424	34850	35740	35755	35827	35711	35386	35359	35442
% Chg Prev Qtr SAAR.....	6.75	-1.47	-5.78	-0.48	2.31	3.56	-2.67	-0.53	1.63	-6.33	10.62	0.17	0.81	-1.28	-1.20	-0.08	0.24
% Chg Same Qtr Last Yr.....	-1.37	-1.76	-1.31	-0.35	-1.40	-0.17	0.65	0.64	0.47	-2.02	1.17	1.34	1.14	2.47	-1.20	-0.08	0.24

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 13: Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (current dollars)

January 2014

	Historical Data														Annual		
	2010:1	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2010	2011	2012
TOTAL NONFARM.....	42171	41912	42254	42198	43394	42890	43441	42573	44800	44345	44279	44821	45275	44947	42134	43075	44561
% Chg Same Qtr Last Yr.....	4.05	2.78	3.32	2.83	2.90	2.33	2.81	0.89	3.24	3.39	1.93	5.28	1.06	1.36	3.25	2.23	3.45
NATURAL RESOURCES, MINING																	
AND CONSTRUCTION.....	48440	46446	45387	44661	49795	48202	46615	45529	52152	48378	46495	48176	50331	48443	46234	47535	48800
% Chg Same Qtr Last Yr.....	3.27	4.91	4.01	3.00	2.80	3.78	2.70	1.95	4.73	0.36	-0.26	5.81	-3.49	0.13	3.79	2.82	2.66
MANUFACTURING.....	51656	51703	51971	52875	53858	52041	53325	52176	54731	56210	52974	55414	55075	55041	52051	52850	54832
% Chg Same Qtr Last Yr.....	12.47	4.95	6.18	2.53	4.26	0.65	2.60	-1.32	1.62	8.01	-0.66	6.21	0.63	-2.08	6.38	1.53	3.75
DURABLE GOODS.....	50903	51469	51303	51007	52693	50739	51955	51558	54264	56961	51835	54477	53289	53267	51170	51736	54384
% Chg Same Qtr Last Yr.....	10.93	6.70	6.89	0.27	3.52	-1.42	1.27	1.08	2.98	12.26	-0.23	5.66	-1.80	-6.48	6.06	1.11	5.12
NONDURABLE GOODS.....	52717	52037	52938	55613	55596	54000	55427	53136	55476	54993	54842	56959	58043	57996	53326	54540	55567
% Chg Same Qtr Last Yr.....	14.62	2.60	5.27	5.82	5.46	3.77	4.70	-4.45	-0.22	1.84	-1.06	7.19	4.63	5.46	6.89	2.28	1.88
TRADE, TRANSPORTATION, UTILITIES.....	38384	39228	39394	38596	40205	40086	40576	39735	41454	41115	40768	41296	41521	41353	38900	40150	41158
% Chg Same Qtr Last Yr.....	1.35	3.68	4.85	1.79	4.74	2.19	3.00	2.95	3.11	2.57	0.47	3.93	0.16	0.58	2.91	3.21	2.51
WHOLESALE TRADE.....	56690	57121	59235	58340	59480	59346	60113	60098	61753	61034	60406	66027	63685	64121	57847	59759	62305
% Chg Same Qtr Last Yr.....	1.65	2.56	5.93	3.56	4.92	3.90	1.48	3.01	3.82	2.84	0.49	9.87	3.13	5.06	3.43	3.31	4.26
RETAIL TRADE.....	26756	28102	27373	26907	28072	27671	28653	27875	28999	28606	28125	27663	28098	27771	27285	28068	28348
% Chg Same Qtr Last Yr.....	1.67	6.59	3.68	1.67	4.92	-1.54	4.68	3.59	3.30	3.38	-1.84	-0.76	-3.11	-2.92	3.40	2.87	1.00
TRANSPORTATION & UTILITIES.....	49062	49326	49621	48680	51129	51554	50530	49170	51661	51801	51795	50861	52845	52917	49172	50596	51530
% Chg Same Qtr Last Yr.....	2.75	2.88	5.76	0.31	4.21	4.52	1.83	1.01	1.04	0.48	2.50	3.44	2.29	2.15	2.90	2.89	1.85
INFORMATION.....	54450	52972	54031	51548	56372	56628	56576	56237	58785	58127	58768	59448	60342	60620	53250	56453	58782
% Chg Same Qtr Last Yr.....	7.80	3.40	2.49	0.32	3.53	6.90	4.71	9.10	4.28	2.65	3.87	5.71	2.65	4.29	3.48	6.02	4.12
FINANCIAL ACTIVITIES.....	57512	59973	62246	65800	62912	61092	63339	64043	64590	68836	65645	69180	66581	66869	61383	62847	67063
% Chg Same Qtr Last Yr.....	1.88	5.47	7.67	12.50	9.39	1.87	1.76	-2.67	2.67	12.68	3.64	8.02	3.08	-2.86	6.93	2.38	6.71
PROFESSIONAL & BUSINESS SERVICES.....	48873	47323	47476	47023	49143	48408	48138	47009	52126	50407	51878	53252	53796	53489	47674	48175	51915
% Chg Same Qtr Last Yr.....	6.89	1.55	1.02	3.27	0.55	2.29	1.39	-0.03	6.07	4.13	7.77	13.28	3.21	6.11	3.16	1.05	7.77
EDUCATION & HEALTH SERVICES.....	44623	44026	44014	44357	44512	45114	45332	43800	45951	44807	45779	44932	46813	46811	44255	44690	45367
% Chg Same Qtr Last Yr.....	2.70	1.22	0.59	1.13	-0.25	2.47	2.99	-1.26	3.23	-0.68	0.98	2.58	1.88	4.47	1.41	0.98	1.52
LEISURE & HOSPITALITY.....	21051	19835	19782	21049	21457	20065	20824	20951	22345	20821	20657	21696	21503	20069	20429	20824	21380
% Chg Same Qtr Last Yr.....	3.85	3.34	2.58	5.38	1.93	1.16	5.27	-0.46	4.14	3.77	-0.80	3.55	-3.77	-3.61	3.80	1.93	2.67
OTHER SERVICES.....	37675	37250	38300	37232	39678	37926	38665	39174	39622	40075	39189	39408	39579	39487	37614	38861	39574
% Chg Same Qtr Last Yr.....	3.20	1.86	3.98	-2.49	5.32	1.81	0.95	5.22	-0.14	5.67	1.36	0.60	-0.11	-1.47	1.59	3.31	1.83
GOVERNMENT.....	39455	39709	40519	39101	39915	41146	42029	40261	40950	41075	43187	41089	41705	42461	39696	40838	41575
% Chg Same Qtr Last Yr.....	1.55	0.43	1.43	2.30	1.17	3.62	3.72	2.97	2.59	-0.17	2.76	2.06	1.85	3.37	1.42	2.88	1.81
FEDERAL, CIVILIAN.....	67421	62307	67664	70210	70640	70459	70686	71235	71827	71355	71241	71296	71671	71738	66901	70755	71430
% Chg Same Qtr Last Yr.....	5.16	-1.19	5.53	7.81	4.77	13.08	4.47	1.46	1.68	1.27	0.78	0.09	-0.22	0.54	4.36	5.76	0.95
STATE & LOCAL.....	35812	36313	36707	35060	35883	37183	38064	36189	36888	37008	39307	37158	37810	38596	35973	36830	37590
% Chg Same Qtr Last Yr.....	0.66	-0.07	0.05	0.93	0.20	2.40	3.70	3.22	2.80	-0.47	3.26	2.68	2.50	4.29	0.39	2.38	2.06

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 14: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)

January 2014

	Historical Data														Annual		
	2010:1	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2010	2011	2012
TOTAL NONFARM.....	41773	41967	42211	42580	42967	42974	43371	42957	44330	44417	44223	45227	44760	45007	42133	43067	44549
% Chg Prev Qtr SAAR.....	3.24	1.86	2.35	3.54	3.69	0.07	3.74	-3.76	13.41	0.78	-1.73	9.40	-4.07	2.23	3.21	2.22	3.44
% Chg Same Qtr Last Yr.....	4.09	2.79	3.24	2.75	2.86	2.40	2.75	0.89	3.17	3.36	1.97	5.28	0.97	1.33	3.21	2.22	3.44
NATURAL RESOURCES, MINING & CONSTRUCTION.....	46558	46461	46514	45194	47899	48217	47725	46117	50052	48392	47677	48603	48617	48384	46182	47490	48681
% Chg Prev Qtr SAAR.....	26.74	-0.84	0.46	-10.88	26.18	2.68	-4.01	-12.81	38.75	-12.62	-5.78	8.00	0.12	-1.90	3.76	2.83	2.51
% Chg Same Qtr Last Yr.....	3.22	4.81	4.01	2.99	2.88	3.78	2.60	2.04	4.49	0.36	-0.10	5.39	-2.87	-0.02	3.76	2.83	2.51
MANUFACTURING.....	51363	51696	52140	52999	53544	52068	53501	52269	54412	56263	53150	55493	54758	55121	52050	52845	54829
% Chg Prev Qtr SAAR.....	-2.65	2.62	3.48	6.76	4.17	-10.58	11.48	-8.90	17.43	14.32	-20.37	18.84	-5.20	2.68	6.37	1.53	3.75
% Chg Same Qtr Last Yr.....	12.42	4.99	6.19	2.49	4.25	0.72	2.61	-1.38	1.62	8.06	-0.66	6.17	0.64	-2.03	6.37	1.53	3.75
DURABLE GOODS.....	50673	51448	51465	51086	52436	50759	52135	51602	53988	57014	52022	54505	53014	53330	51168	51733	54382
% Chg Prev Qtr SAAR.....	-2.41	6.26	0.13	-2.91	11.00	-12.19	11.29	-4.02	19.82	24.38	-30.69	20.50	-10.50	2.40	6.04	1.10	5.12
% Chg Same Qtr Last Yr.....	10.86	6.76	6.94	0.20	3.48	-1.34	1.30	1.01	2.96	12.32	-0.22	5.62	-1.80	-6.46	6.04	1.10	5.12
NONDURABLE GOODS.....	52331	52050	53119	55809	55193	54038	55599	53307	55085	55047	54999	57126	57651	58107	53328	54534	55564
% Chg Prev Qtr SAAR.....	-3.0202	-2.1319	8.473	21.844	-4.3419	-8.1119	12.063	-15.49	14.021	-0.2763	-0.3498	16.394	3.7228	3.2052	6.87	2.26	1.89
% Chg Same Qtr Last Yr.....	14.624	2.6061	5.2464	5.8307	5.4683	3.8189	4.6675	-4.483	-0.196	1.8668	-1.0794	7.1639	4.6576	5.5593	6.87	2.26	1.89
TRADE, TRANSPORTATION, UTILITIES.....	37983	39148	39313	39160	39756	40012	40492	40310	40932	41022	40728	41877	40950	41384	38901	40143	41140
% Chg Prev Qtr SAAR.....	-5.54	12.84	1.70	-1.55	6.22	2.61	4.89	-1.78	6.31	0.88	-2.83	11.77	-8.57	4.31	2.85	3.19	2.48
% Chg Same Qtr Last Yr.....	1.30	3.72	4.77	1.64	4.67	2.21	3.00	2.94	2.96	2.52	0.58	3.89	0.04	0.88	2.85	3.19	2.48
WHOLESALE TRADE.....	56256	57267	59405	58474	59039	59481	60215	60216	61323	61186	60505	66136	63047	64337	57851	59738	62287
% Chg Prev Qtr SAAR.....	-1.66	7.39	15.79	-6.12	3.92	3.03	5.03	0.01	7.56	-0.89	-4.38	42.75	-17.41	8.44	3.41	3.26	4.27
% Chg Same Qtr Last Yr.....	1.61	2.62	5.87	3.51	4.95	3.87	1.36	2.98	3.87	2.87	0.48	9.83	2.81	5.15	3.41	3.26	4.27
RETAIL TRADE.....	26425	27999	27248	27455	27686	27584	28533	28431	28532	28515	28047	28182	27639	27817	27282	28058	28319
% Chg Prev Qtr SAAR.....	-9.23	26.02	-10.29	3.06	3.41	-1.47	14.49	-1.42	1.43	-0.25	-6.40	1.95	-7.49	2.60	3.30	2.85	0.93
% Chg Same Qtr Last Yr.....	1.60	6.66	3.59	1.41	4.77	-1.48	4.71	3.56	3.06	3.37	-1.70	-0.87	-3.13	-2.45	3.30	2.85	0.93
TRANSPORTATION & UTILITIES.....	48644	49212	49596	49272	50694	51428	50505	49804	51169	51580	51832	51585	52253	52731	49181	50608	51541
% Chg Prev Qtr SAAR.....	-3.69	4.75	3.15	-2.59	12.06	5.91	-6.98	-5.44	11.42	3.25	1.97	-1.89	5.28	3.71	2.86	2.90	1.84
% Chg Same Qtr Last Yr.....	2.73	2.82	5.68	0.34	4.22	4.50	1.83	1.08	0.94	0.30	2.63	3.58	2.12	2.23	2.86	2.90	1.84
INFORMATION.....	54490	52972	54031	51586	56287	56671	56447	56237	58648	58304	58585	59494	60679	60620	53270	56410	58758
% Chg Prev Qtr SAAR.....	25.00	-10.69	8.24	-16.91	41.74	2.76	-1.57	-1.48	18.29	-2.32	1.94	6.35	8.21	-0.39	3.48	5.90	4.16
% Chg Same Qtr Last Yr.....	7.81	3.47	2.64	0.10	3.30	6.98	4.47	9.01	4.19	2.88	3.79	5.79	3.46	3.97	3.48	5.90	4.16
FINANCIAL ACTIVITIES.....	57194	60161	62398	65817	62448	61347	63509	64043	64075	69053	65899	69398	65977	66821	61392	62837	67106
% Chg Prev Qtr SAAR.....	-9.00	22.43	15.72	23.78	-18.95	-6.87	14.86	3.40	0.20	34.89	-17.06	22.99	-18.31	5.21	6.89	2.35	6.79
% Chg Same Qtr Last Yr.....	1.87	5.45	7.62	12.40	9.19	1.97	1.78	-2.70	2.60	12.56	3.76	8.36	2.97	-3.23	6.89	2.35	6.79

(CONTINUED ON NEXT PAGE)

Table 14: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)

January 2014

	Historical Data														Annual		
	2010:1	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2010	2011	2012
PROFESSIONAL & BUSINESS SERVICES.....	48304	47271	47300	47921	48472	48312	47887	47907	51360	50262	51592	54394	52896	53164	47699	48144	51902
% Chg Prev Qtr SAAR.....	16.97	-8.28	0.24	5.36	4.68	-1.31	-3.47	0.17	32.10	-8.28	11.02	23.56	-10.57	2.05	3.13	0.93	7.81
% Chg Same Qtr Last Yr.....	7.03	1.58	0.89	3.17	0.35	2.20	1.24	-0.03	5.96	4.04	7.74	13.54	2.99	5.78	3.13	0.93	7.81
EDUCATION & HEALTH SERVICES.....	44454	44006	43944	44631	44349	45063	45195	44071	45783	44712	45682	45290	46778	46717	44259	44669	45367
% Chg Prev Qtr SAAR.....	2.50	-3.97	-0.56	6.40	-2.50	6.60	1.18	-9.59	16.47	-9.04	8.96	-3.39	13.81	-0.52	1.35	0.93	1.56
% Chg Same Qtr Last Yr.....	2.73	1.23	0.45	1.02	-0.24	2.40	2.85	-1.25	3.24	-0.78	1.08	2.77	2.17	4.49	1.35	0.93	1.56
LEISURE & HOSPITALITY.....	20147	20377	20316	20799	20525	20621	21376	20704	21390	21355	21231	21474	20579	20574	20410	20807	21363
% Chg Prev Qtr SAAR.....	8.12	4.64	-1.19	9.86	-5.17	1.89	15.48	-12.00	13.92	-0.64	-2.31	4.66	-15.65	-0.10	3.74	1.95	2.67
% Chg Same Qtr Last Yr.....	3.75	3.45	2.49	5.27	1.87	1.20	5.22	-0.45	4.21	3.56	-0.68	3.72	-3.79	-3.66	3.74	1.95	2.67
OTHER SERVICES.....	37311	37535	38527	37111	39313	38224	38866	39047	39265	40357	39352	39458	39018	39726	37621	38862	39608
% Chg Prev Qtr SAAR.....	-7.87	2.42	11.00	-13.91	25.92	-10.63	6.89	1.88	2.26	11.59	-9.60	1.09	-4.39	7.46	1.60	3.30	1.92
% Chg Same Qtr Last Yr.....	3.17	1.87	4.08	-2.55	5.37	1.84	0.88	5.22	-0.12	5.58	1.25	1.05	-0.63	-1.56	1.60	3.30	1.92
GOVERNMENT.....	39890	39410	39456	39902	40404	40985	40859	41097	41463	40953	41908	41765	42018	42261	39664	40836	41522
% Chg Prev Qtr SAAR.....	9.22	-4.73	0.46	4.60	5.13	5.88	-1.23	2.36	3.60	-4.83	9.66	-1.35	2.45	2.33	1.42	2.95	1.68
% Chg Same Qtr Last Yr.....	1.69	0.41	1.34	2.26	1.29	4.00	3.56	3.00	2.62	-0.08	2.57	1.63	1.34	3.19	1.42	2.95	1.68
FEDERAL, CIVILIAN.....	68010	60878	66514	70676	71633	71163	69765	71802	72551	71784	71720	67653	69308	75083	66520	71091	70927
% Chg Prev Qtr SAAR.....	13.97	-35.80	42.50	27.47	5.53	-2.60	-7.63	12.20	4.24	-4.16	-0.36	-20.82	10.15	37.73	4.05	6.87	-0.23
% Chg Same Qtr Last Yr.....	5.94	-1.57	4.16	7.37	5.33	16.89	4.89	1.59	1.28	0.87	2.80	-5.78	-4.47	4.59	4.05	6.87	-0.23
STATE & LOCAL.....	36217	36125	35696	35843	36315	36969	36928	37003	37362	36854	37953	38122	38302	38168	35970	36803	37573
% Chg Prev Qtr SAAR.....	8.21	-1.02	-4.66	1.66	5.37	7.40	-0.44	0.81	3.94	-5.33	12.48	1.80	1.90	-1.40	0.44	2.32	2.09
% Chg Same Qtr Last Yr.....	0.71	-0.01	0.12	0.94	0.27	2.34	3.45	3.24	2.88	-0.31	2.78	3.03	2.52	3.57	0.44	2.32	2.09

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 15: Tennessee Civilian Labor Force and Unemployment Rate, Not Seasonally Adjusted**January 2014**

	Historical Data														Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012
CIVILIAN LABOR FORCE (THOUS).....	3108	3110	3105	3098	3122	3131	3117	3085	3117	3122	3131	3100	3126	3124	3080	3117	3114
% Chg Same Qtr Last Yr.....	2.09	2.25	3.13	3.45	0.45	0.66	0.37	-0.42	-0.18	-0.28	0.44	0.49	0.30	0.08	1.56	1.21	-0.11
EMPLOYED PERSONS (THOUS).....	2811	2817	2816	2788	2829	2839	2858	2823	2866	2870	2897	2844	2864	2865	2777	2829	2864
% Chg Same Qtr Last Yr.....	3.48	3.84	4.19	4.63	0.64	0.78	1.50	1.24	1.33	1.08	1.38	0.73	-0.06	-0.16	2.36	1.85	1.26
UNEMPLOYED PERSONS (THOUS).....	298	293	290	309	294	291	259	262	250	252	233	256	262	259	302	288	249
% Chg Same Qtr Last Yr.....	-9.39	-10.81	-6.10	-6.10	-1.36	-0.49	-10.67	-15.34	-14.74	-13.45	-9.94	-2.09	4.46	2.82	-5.32	-4.67	-13.50
PARTICIPATION RATE (PERCENT).....	62.1	62.0	61.8	61.5	61.8	61.8	61.3	60.5	60.9	60.9	60.8	60.1	60.4	60.2	61.5	61.6	60.8
% Chg Same Qtr Last Yr.....	1.13	1.39	2.36	2.55	-0.54	-0.44	-0.85	-1.62	-1.38	-1.46	-0.74	-0.69	-0.87	-1.09	0.64	0.16	-1.30
UNEMPLOYMENT RATE (PERCENT).....	9.6	9.4	9.3	10.0	9.4	9.3	8.3	8.5	8.0	8.1	7.4	8.3	8.4	8.3	9.8	9.3	8.0

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 16: Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted

January 2014

	Historical Data															Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012	
CIVILIAN LABOR FORCE (THOUS).....	3098	3094	3103	3121	3119	3112	3112	3111	3112	3109	3121	3130	3128	3109	3080	3116	3113	
% Chg Prev Qtr SAAR.....	10.09	-0.47	1.17	2.38	-0.24	-0.94	0.02	-0.15	0.05	-0.27	1.54	1.06	-0.20	-2.43	1.54	1.19	-0.09	
% Chg Same Qtr Last Yr.....	1.77	2.36	3.13	3.22	0.70	0.58	0.30	-0.33	-0.25	-0.09	0.29	0.59	0.53	-0.02	1.54	1.19	-0.09	
EMPLOYED PERSONS (THOUS).....	2796	2801	2805	2823	2824	2822	2843	2860	2859	2858	2880	2886	2870	2845	2778	2828	2864	
% Chg Prev Qtr SAAR.....	13.61	0.62	0.60	2.62	0.12	-0.24	2.98	2.40	-0.21	-0.08	3.14	0.82	-2.22	-3.48	2.35	1.82	1.27	
% Chg Same Qtr Last Yr.....	3.07	3.98	4.30	4.23	0.99	0.77	1.36	1.31	1.22	1.26	1.30	0.91	0.40	-0.47	2.35	1.82	1.27	
UNEMPLOYED PERSONS (THOUS).....	301	293	298	298	296	290	269	251	253	251	241	244	258	264	302	288	249	
% Chg Prev Qtr SAAR.....	-16.81	-10.17	6.72	0.10	-3.62	-7.52	-25.55	-24.25	3.05	-2.47	-15.34	3.99	26.16	9.76	-5.32	-4.61	-13.53	
% Chg Same Qtr Last Yr.....	-8.90	-10.92	-6.71	-5.48	-1.93	-1.22	-9.72	-15.80	-14.38	-13.23	-10.40	-3.01	2.02	5.08	-5.32	-4.61	-13.53	
PARTICIPATION RATE (PERCENT).....	61.9	61.7	61.8	62.0	61.7	61.4	61.2	61.0	60.8	60.6	60.7	60.6	60.4	59.9	61.5	61.6	60.8	
% Chg Prev Qtr SAAR.....	9.27	-1.21	0.42	1.13	-1.45	-2.14	-1.18	-1.33	-1.13	-1.45	0.35	-0.12	-1.37	-3.57	0.63	0.14	-1.29	
% Chg Same Qtr Last Yr.....	0.81	1.49	2.36	2.32	-0.28	-0.52	-0.92	-1.53	-1.45	-1.27	-0.89	-0.59	-0.65	-1.19	0.63	0.14	-1.29	
UNEMPLOYMENT RATE (PERCENT).....	9.7	9.5	9.6	9.6	9.5	9.3	8.6	8.1	8.1	8.1	7.7	7.8	8.3	8.5	9.8	9.2	8.0	

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 17: Tennessee Taxable Sales, Not Seasonally Adjusted (millions of 2009 dollars)

January 2014

	Historical Data													Annual			
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012
TOTAL TAXABLE SALES.....	22152	21689	23149	20669	22775	22475	24053	22051	23405	22630	24354	21967	23949	23180	86978	89971	92441
% Chg Same Qtr Last Yr.....	1.65	1.95	2.05	3.40	2.81	3.62	3.91	6.69	2.77	0.69	1.25	-0.38	2.32	2.43	0.92	3.44	2.74
AUTO DEALERS.....	1970	1996	1800	1965	2074	2077	1975	2219	2225	2270	2041	2246	2318	2421	7540	8090	8754
% Chg Same Qtr Last Yr.....	14.53	7.26	15.21	10.76	5.24	4.08	9.69	12.94	7.29	9.28	3.35	1.24	4.19	6.65	12.17	7.29	8.21
PURCHASES FROM MANUFACTURERS....	938	919	993	816	995	1008	1039	804	975	930	1121	808	993	971	3605	3858	3830
% Chg Same Qtr Last Yr.....	7.21	1.72	7.04	8.14	6.08	9.65	4.63	-1.51	-1.98	-7.76	7.88	0.54	1.82	4.47	3.25	7.02	-0.74
MISC DURABLE GOODS.....	3889	3659	3653	3271	3982	3857	3875	3694	4083	3742	3902	3500	4197	3945	14283	14985	15421
% Chg Same Qtr Last Yr.....	8.30	4.94	4.42	6.14	2.37	5.41	6.09	12.92	2.55	-2.97	0.68	-5.26	2.77	5.43	3.95	4.91	2.91
EATING AND DRINKING PLACES.....	2281	2291	2200	2159	2334	2341	2301	2345	2463	2423	2389	2358	2562	2488	8911	9135	9620
% Chg Same Qtr Last Yr.....	0.71	2.81	0.90	0.90	2.31	2.21	4.59	8.62	5.54	3.50	3.83	0.56	4.00	2.68	0.81	2.51	5.31
FOOD STORES.....	2161	2188	2348	2049	2190	2200	2420	2143	2256	2279	2463	2256	2334	2296	8740	8858	9140
% Chg Same Qtr Last Yr.....	-1.28	0.02	1.23	0.21	1.35	0.53	3.08	4.62	3.01	3.60	1.78	5.27	3.50	0.76	-0.86	1.34	3.19
LIQUOR STORES.....	163	160	199	157	167	166	210	172	183	174	219	178	184	188	674	700	748
% Chg Same Qtr Last Yr.....	3.29	2.90	2.92	3.22	2.33	4.15	5.54	9.21	9.59	4.96	4.34	3.68	0.83	7.58	2.53	3.91	6.83
HOTELS AND MOTELS.....	541	555	509	443	609	627	566	496	639	627	583	504	632	628	2030	2244	2345
% Chg Same Qtr Last Yr.....	0.60	1.47	-1.53	4.17	12.63	12.92	11.09	12.11	4.90	0.06	2.99	1.45	-1.03	0.06	-0.16	10.55	4.49
OTHER RETAIL AND SERVICE.....	6609	6462	7639	6326	6813	6672	7799	6699	7080	6793	7870	6719	7202	6899	26860	27610	28442
% Chg Same Qtr Last Yr.....	0.61	0.94	1.01	2.84	3.09	3.26	2.10	5.89	3.93	1.81	0.91	0.30	1.72	1.56	0.27	2.79	3.01
MISC NONDURABLE GOODS.....	1862	1768	2132	1762	1895	1836	2181	1883	1963	1873	2224	1898	2002	1916	7517	7674	7943
% Chg Same Qtr Last Yr.....	3.56	1.75	1.39	0.38	1.75	3.86	2.31	6.88	3.61	1.98	1.98	0.78	1.98	2.33	2.15	2.09	3.51
TRANSPORTATION, COMMUNICATION.....	1738	1692	1676	1722	1718	1690	1687	1597	1538	1520	1541	1502	1525	1429	6817	6816	6197
% Chg Same Qtr Last Yr.....	-16.89	-4.27	-7.94	0.64	-1.20	-0.10	0.65	-7.23	-10.43	-10.10	-8.63	-6.00	-0.89	-5.98	-11.90	-0.01	-9.09
PER CAPITA (\$).....	3502	3423	3648	3248	3569	3513	3749	3428	3629	3500	3756	3379	3674	3547	13737	14080	14313
% Chg Same Qtr Last Yr.....	0.85	1.23	1.40	2.64	1.93	2.62	2.79	5.54	1.67	-0.38	0.18	-1.43	1.24	1.35	0.17	2.49	1.66

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 18: Tennessee Taxable Sales, Seasonally Adjusted (millions of 2009 dollars)

January 2014

	Historical Data													Annual			
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012
TOTAL TAXABLE SALES.....	21800	21833	21957	22075	22379	22670	22846	23522	22977	22875	23131	23398	23504	23453	86963	89969	92504
% Chg Prev Qtr SAAR.....	8.23	0.61	2.29	2.17	5.62	5.30	3.14	12.38	-8.96	-1.76	4.55	4.71	1.81	-0.86	0.86	3.46	2.82
% Chg Same Qtr Last Yr.....	1.44	2.09	2.18	3.28	2.66	3.83	4.05	6.56	2.67	0.90	1.25	-0.53	2.29	2.53	0.86	3.46	2.82
AUTO DEALERS.....	1887	1909	1970	1962	1992	1998	2151	2206	2144	2193	2215	2227	2239	2344	7549	8104	8759
% Chg Prev Qtr SAAR.....	25.29	4.70	13.46	-1.47	6.25	1.20	34.24	10.57	-10.69	9.44	4.10	2.07	2.24	20.00	12.24	7.36	8.07
% Chg Same Qtr Last Yr.....	14.88	7.97	14.76	10.04	5.60	4.71	9.20	12.40	7.62	9.75	2.99	0.95	4.42	6.85	12.24	7.36	8.07
PURCHASES FROM MANUFACTURERS....	913	892	918	951	965	978	961	939	944	903	1037	945	961	944	3598	3855	3823
% Chg Prev Qtr SAAR.....	19.22	-9.01	12.38	15.24	5.89	5.50	-7.03	-8.54	2.21	-16.58	73.95	-31.08	7.16	-6.98	3.01	7.17	-0.84
% Chg Same Qtr Last Yr.....	6.83	1.50	6.92	8.87	5.69	9.67	4.59	-1.28	-2.15	-7.73	7.92	0.55	1.75	4.56	3.01	7.17	-0.84
MISC DURABLE GOODS.....	3646	3606	3597	3625	3721	3819	3810	4091	3808	3720	3832	3872	3912	3930	14261	14974	15450
% Chg Prev Qtr SAAR.....	30.53	-4.31	-1.09	3.15	11.00	11.07	-1.02	32.95	-24.90	-8.95	12.56	4.25	4.22	1.87	3.73	5.00	3.18
% Chg Same Qtr Last Yr.....	7.90	5.32	4.27	6.25	2.03	5.90	5.92	12.86	2.36	-2.60	0.58	-5.35	2.72	5.65	3.73	5.00	3.18
EATING AND DRINKING PLACES.....	2221	2249	2233	2230	2266	2304	2335	2423	2386	2389	2423	2437	2478	2459	8910	9134	9623
% Chg Prev Qtr SAAR.....	2.63	5.21	-2.83	-0.55	6.56	6.89	5.48	16.07	-6.00	0.55	5.81	2.28	6.90	-3.10	0.78	2.52	5.34
% Chg Same Qtr Last Yr.....	0.55	2.90	0.87	1.07	2.02	2.43	4.55	8.67	5.32	3.72	3.80	0.57	3.85	2.90	0.78	2.52	5.34
FOOD STORES.....	2179	2188	2198	2174	2209	2208	2264	2268	2274	2294	2303	2385	2353	2315	8741	8855	9140
% Chg Prev Qtr SAAR.....	0.58	1.59	1.75	-4.15	6.46	-0.14	10.62	0.69	1.04	3.59	1.54	15.06	-5.27	-6.39	-0.93	1.30	3.21
% Chg Same Qtr Last Yr.....	-1.26	0.46	1.07	-0.09	1.34	0.91	3.04	4.31	2.96	3.91	1.71	5.16	3.48	0.89	-0.93	1.30	3.21
LIQUOR STORES.....	168	170	171	170	172	177	180	186	189	186	188	193	190	200	673	699	748
% Chg Prev Qtr SAAR.....	10.29	3.36	1.93	-1.76	5.42	11.53	7.36	13.12	6.13	-5.74	4.70	10.45	-5.33	22.45	2.47	3.82	6.98
% Chg Same Qtr Last Yr.....	3.13	2.91	2.91	3.36	2.20	4.17	5.53	9.31	9.50	4.99	4.33	3.71	0.79	7.60	2.47	3.82	6.98
HOTELS AND MOTELS.....	504	509	511	529	563	576	572	590	589	578	591	596	582	580	2034	2241	2348
% Chg Prev Qtr SAAR.....	-5.09	4.42	1.35	15.42	28.16	9.51	-2.92	13.01	-0.56	-7.07	9.23	3.24	-8.66	-1.95	-0.25	10.19	4.78
% Chg Same Qtr Last Yr.....	0.05	1.49	-0.60	3.77	11.86	13.19	11.98	11.39	4.55	0.35	3.35	1.04	-1.09	0.25	-0.25	10.19	4.78
OTHER RETAIL AND SERVICE.....	6682	6732	6790	6829	6878	6960	6952	7212	7135	7094	7031	7218	7252	7213	26865	27618	28472
% Chg Prev Qtr SAAR.....	1.35	3.02	3.48	2.28	2.92	4.85	-0.44	15.80	-4.21	-2.25	-3.50	11.05	1.93	-2.18	0.24	2.80	3.09
% Chg Same Qtr Last Yr.....	0.44	0.97	1.33	2.53	2.92	3.38	2.39	5.61	3.73	1.93	1.14	0.08	1.65	1.67	0.24	2.80	3.09
MISC NONDURABLE GOODS.....	1896	1867	1881	1882	1921	1942	1931	2008	1986	1983	1971	2022	2024	2029	7522	7676	7948
% Chg Prev Qtr SAAR.....	4.21	-5.95	2.96	0.16	8.55	4.43	-2.21	16.98	-4.44	-0.58	-2.25	10.71	0.31	1.10	2.13	2.04	3.55
% Chg Same Qtr Last Yr.....	3.01	1.81	1.86	0.27	1.29	3.98	2.65	6.71	3.37	2.10	2.09	0.70	1.93	2.35	2.13	2.04	3.55
TRANSPORTATION, COMMUNICATION.....	1702	1710	1689	1722	1692	1707	1690	1599	1522	1534	1539	1504	1512	1441	6811	6811	6194
% Chg Prev Qtr SAAR.....	-1.80	1.91	-4.87	8.11	-6.82	3.63	-3.92	-19.85	-18.01	3.33	1.17	-8.60	1.89	-17.42	-11.91	0.01	-9.07
% Chg Same Qtr Last Yr.....	-16.44	-4.04	-8.67	0.72	-0.59	-0.17	0.08	-7.14	-10.06	-10.13	-8.96	-5.92	-0.67	-6.08	-11.91	0.01	-9.07
PER CAPITA (\$):.....	3446	3446	3460	3469	3507	3543	3561	3657	3563	3537	3567	3599	3606	3588	13736	14081	14324
% Chg Prev Qtr SAAR.....	7.54	-0.02	1.65	1.06	4.48	4.17	2.04	11.18	-9.92	-2.80	3.45	3.61	0.74	-1.90	0.10	2.51	1.73
% Chg Same Qtr Last Yr.....	0.65	1.37	1.53	2.52	1.78	2.83	2.93	5.41	1.57	-0.17	0.17	-1.58	1.21	1.45	0.10	2.51	1.73

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 19: Tennessee Taxable Sales, Not Seasonally Adjusted (millions of current dollars)

January 2014

	Historical Data														Annual		
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012
TOTAL TAXABLE SALES.....	22462	22057	23667	21288	23672	23493	25227	23258	24751	24032	25967	23485	25596	24894	88431	93679	98007
% Chg Same Qtr Last Yr.....	3.45	3.42	3.36	5.15	5.38	6.51	6.59	9.25	4.56	2.30	2.93	0.98	3.41	3.59	2.58	5.93	4.62
AUTO DEALERS.....	1998	2030	1841	2023	2155	2171	2071	2340	2353	2411	2176	2401	2477	2600	7665	8421	9279
% Chg Same Qtr Last Yr.....	16.56	8.81	16.70	12.64	7.87	6.98	12.52	15.65	9.16	11.02	5.07	2.62	5.30	7.85	14.02	9.87	10.19
PURCHASES FROM MANUFACTURERS....	951	935	1015	840	1034	1054	1090	848	1031	987	1195	864	1061	1043	3666	4018	4062
% Chg Same Qtr Last Yr.....	9.12	3.19	8.42	9.97	8.73	12.71	7.33	0.86	-0.27	-6.29	9.67	1.92	2.91	5.65	4.94	9.62	1.08
MISC DURABLE GOODS.....	3944	3721	3735	3369	4139	4031	4064	3896	4318	3974	4160	3741	4485	4237	14520	15603	16348
% Chg Same Qtr Last Yr.....	10.22	6.46	5.76	7.94	4.94	8.35	8.83	15.64	4.34	-1.43	2.36	-3.97	3.87	6.62	5.66	7.46	4.77
EATING AND DRINKING PLACES.....	2313	2329	2249	2223	2426	2447	2413	2473	2605	2573	2548	2521	2738	2672	9059	9510	10198
% Chg Same Qtr Last Yr.....	2.50	4.29	2.21	2.61	4.87	5.05	7.29	11.23	7.38	5.14	5.56	1.93	5.11	3.84	2.48	4.98	7.24
FOOD STORES.....	2191	2225	2400	2110	2276	2299	2538	2260	2385	2420	2626	2412	2495	2466	8886	9223	9692
% Chg Same Qtr Last Yr.....	0.48	1.46	2.53	1.91	3.89	3.33	5.74	7.14	4.80	5.25	3.47	6.71	4.60	1.90	0.78	3.79	5.08
LIQUOR STORES.....	165	162	204	162	173	174	220	181	193	185	234	190	197	202	685	729	793
% Chg Same Qtr Last Yr.....	5.12	4.38	4.24	4.96	4.89	7.05	8.27	11.83	11.50	6.64	6.07	5.09	1.90	8.80	4.20	6.42	8.77
HOTELS AND MOTELS.....	548	565	521	456	633	655	593	524	675	666	621	538	676	674	2064	2338	2486
% Chg Same Qtr Last Yr.....	2.39	2.93	-0.26	5.93	15.45	16.07	13.96	14.80	6.73	1.65	4.70	2.84	0.02	1.19	1.47	13.26	6.36
OTHER RETAIL AND SERVICE.....	6701	6571	7810	6516	7081	6974	8180	7065	7488	7214	8392	7183	7697	7409	27312	28751	30158
% Chg Same Qtr Last Yr.....	2.40	2.40	2.31	4.58	5.67	6.13	4.74	8.43	5.74	3.43	2.59	1.67	2.80	2.70	1.91	5.27	4.89
MISC NONDURABLE GOODS.....	1888	1798	2180	1815	1969	1920	2288	1986	2076	1989	2372	2029	2139	2058	7643	7991	8422
% Chg Same Qtr Last Yr.....	5.40	3.22	2.69	2.08	4.30	6.75	4.96	9.45	5.41	3.60	3.68	2.15	3.06	3.48	3.82	4.55	5.40
TRANSPORTATION, COMMUNICATION.....	1763	1721	1713	1774	1785	1767	1769	1685	1627	1614	1643	1605	1630	1534	6930	7095	6569
% Chg Same Qtr Last Yr.....	-15.41	-2.89	-6.75	2.35	1.28	2.68	3.25	-5.00	-8.87	-8.66	-7.11	-4.72	0.17	-4.92	-10.42	2.38	-7.41
PER CAPITA (\$.).....	3551	3481	3729	3345	3710	3672	3932	3616	3838	3716	4005	3612	3927	3809	13967	14660	15174
% Chg Same Qtr Last Yr.....	2.65	2.69	2.71	4.37	4.48	5.48	5.44	8.08	3.44	1.21	1.84	-0.09	2.32	2.49	1.82	4.96	3.51

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 20: Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)

January 2014

	Historical Data													Annual			
	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2010	2011	2012
TOTAL TAXABLE SALES.....	22104	22204	22449	22736	23260	23696	23960	24809	24298	24291	24662	25015	25120	25186	88404	93653	98060
% Chg Prev Qtr SAAR.....	8.72	1.81	4.49	5.23	9.54	7.72	4.53	14.94	-7.99	-0.11	6.25	5.85	1.69	1.06	2.53	5.94	4.71
% Chg Same Qtr Last Yr.....	3.24	3.57	3.49	5.03	5.23	6.72	6.73	9.12	4.46	2.51	2.93	0.83	3.38	3.69	2.53	5.94	4.71
AUTO DEALERS.....	1913	1941	2014	2021	2071	2089	2256	2326	2268	2329	2362	2381	2393	2517	7674	8437	9285
% Chg Prev Qtr SAAR.....	25.86	5.94	15.89	1.48	10.19	3.52	36.05	13.08	-9.74	11.29	5.80	3.17	2.12	22.32	14.09	9.94	10.05
% Chg Same Qtr Last Yr.....	16.93	9.53	16.24	11.90	8.25	7.62	12.02	15.10	9.50	11.50	4.70	2.33	5.54	8.06	14.09	9.94	10.05
PURCHASES FROM MANUFACTURERS....	926	907	939	980	1003	1023	1007	991	999	959	1105	1010	1027	1014	3657	4013	4053
% Chg Prev Qtr SAAR.....	19.77	-7.92	14.79	18.69	9.82	7.92	-5.78	-6.46	3.30	-15.18	76.78	-30.33	7.04	-5.18	4.72	9.73	1.00
% Chg Same Qtr Last Yr.....	8.73	2.97	8.30	10.71	8.34	12.73	7.30	1.09	-0.44	-6.26	9.71	1.92	2.83	5.74	4.72	9.73	1.00
MISC DURABLE GOODS.....	3697	3668	3677	3733	3867	3992	3996	4315	4027	3950	4085	4139	4181	4221	14497	15588	16377
% Chg Prev Qtr SAAR.....	31.13	-3.17	1.04	6.24	15.12	13.61	0.31	35.98	-24.10	-7.41	14.39	5.38	4.10	3.84	5.45	7.52	5.06
% Chg Same Qtr Last Yr.....	9.82	6.84	5.61	8.05	4.59	8.85	8.66	15.57	4.14	-1.05	2.25	-4.06	3.82	6.84	5.45	7.52	5.06
EATING AND DRINKING PLACES.....	2252	2287	2283	2297	2355	2408	2449	2556	2523	2537	2584	2606	2649	2640	9057	9509	10201
% Chg Prev Qtr SAAR.....	3.10	6.46	-0.75	2.43	10.51	9.34	6.90	18.71	-5.00	2.25	7.53	3.38	6.77	-1.22	2.45	4.98	7.28
% Chg Same Qtr Last Yr.....	2.34	4.38	2.17	2.78	4.58	5.28	7.25	11.28	7.15	5.37	5.53	1.94	4.96	4.06	2.45	4.98	7.28
FOOD STORES.....	2210	2225	2247	2240	2296	2308	2375	2392	2405	2436	2456	2550	2515	2486	8886	9218	9689
% Chg Prev Qtr SAAR.....	1.04	2.80	3.93	-1.28	10.40	2.15	12.11	2.98	2.12	5.34	3.19	16.30	-5.38	-4.58	0.72	3.74	5.11
% Chg Same Qtr Last Yr.....	0.49	1.91	2.38	1.61	3.88	3.72	5.70	6.82	4.76	5.57	3.40	6.59	4.58	2.03	0.72	3.74	5.11
LIQUOR STORES.....	171	173	175	175	179	185	189	196	199	197	200	206	203	215	685	728	793
% Chg Prev Qtr SAAR.....	10.79	4.59	4.12	1.18	9.33	14.09	8.81	15.69	7.26	-4.15	6.40	11.64	-5.44	24.82	4.17	6.32	8.94
% Chg Same Qtr Last Yr.....	4.97	4.39	4.23	5.11	4.76	7.07	8.25	11.94	11.41	6.66	6.06	5.12	1.86	8.82	4.17	6.32	8.94
HOTELS AND MOTELS.....	511	518	522	545	585	602	600	622	623	614	630	637	623	622	2067	2333	2489
% Chg Prev Qtr SAAR.....	-4.65	5.66	3.53	18.88	32.91	12.02	-1.61	15.58	0.50	-5.50	11.01	4.35	-8.76	-0.05	1.40	12.85	6.69
% Chg Same Qtr Last Yr.....	1.83	2.95	0.68	5.52	14.66	16.35	14.88	14.07	6.37	1.94	5.06	2.41	-0.03	1.38	1.40	12.85	6.69
OTHER RETAIL AND SERVICE.....	6776	6847	6942	7033	7149	7275	7291	7606	7545	7534	7497	7717	7751	7746	27310	28748	30182
% Chg Prev Qtr SAAR.....	1.81	4.24	5.70	5.35	6.74	7.25	0.91	18.43	-3.19	-0.60	-1.94	12.25	1.81	-0.29	1.90	5.27	4.99
% Chg Same Qtr Last Yr.....	2.22	2.42	2.64	4.26	5.50	6.26	5.03	8.15	5.54	3.55	2.82	1.45	2.73	2.81	1.90	5.27	4.99
MISC NONDURABLE GOODS.....	1923	1899	1923	1938	1997	2030	2025	2118	2100	2105	2102	2162	2163	2179	7646	7990	8425
% Chg Prev Qtr SAAR.....	4.69	-4.83	5.17	3.16	12.58	6.83	-0.89	19.64	-3.42	1.10	-0.66	11.91	0.19	3.05	3.82	4.49	5.45
% Chg Same Qtr Last Yr.....	4.84	3.28	3.17	1.96	3.83	6.88	5.30	9.28	5.17	3.73	3.79	2.07	3.01	3.51	3.82	4.49	5.45
TRANSPORTATION, COMMUNICATION.....	1726	1739	1727	1774	1759	1784	1773	1687	1609	1629	1641	1608	1616	1547	6923	7089	6566
% Chg Prev Qtr SAAR.....	-1.35	3.12	-2.83	11.35	-3.36	6.01	-2.62	-18.03	-17.14	5.07	2.81	-7.62	1.77	-15.82	-10.42	2.40	-7.39
% Chg Same Qtr Last Yr.....	-14.96	-2.65	-7.50	2.43	1.90	2.61	2.66	-4.91	-8.49	-8.70	-7.45	-4.64	0.39	-5.02	-10.42	2.40	-7.39
PER CAPITA (\$)......	3494	3504	3537	3573	3645	3704	3735	3857	3767	3756	3804	3848	3854	3854	13963	14657	15184
% Chg Prev Qtr SAAR.....	8.04	1.17	3.83	4.09	8.36	6.56	3.41	13.71	-8.97	-1.16	5.13	4.73	0.62	0.00	1.77	4.97	3.60
% Chg Same Qtr Last Yr.....	2.44	2.84	2.84	4.25	4.33	5.69	5.59	7.95	3.35	1.42	1.84	-0.24	2.29	2.59	1.77	4.97	3.60

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 1: Selected U.S. and Tennessee Economic Indicators

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
US GDP (Bil2009\$).....	12684.5	12909.7	13270.0	13774.0	14235.6	14615.2	14876.8	14833.6	14417.9	14779.4	15052.4	15470.7
Percentage change.....	0.95	1.78	2.79	3.80	3.35	2.67	1.79	-0.29	-2.80	2.51	1.85	2.78
US GDP (Bil\$).....	10625.3	10980.2	11512.3	12277.0	13095.4	13857.9	14480.4	14720.3	14418.0	14958.3	15533.8	16244.6
Percentage change.....	3.26	3.34	4.85	6.64	6.67	5.82	4.49	1.66	-2.05	3.75	3.85	4.58
TN PERSONAL INCOME (MIL2009\$).....	190837	193283	197069	203714	205963	212805	217280	218908	217002	221556	228285	236000
Percentage change.....	4.22	1.28	1.96	3.37	1.10	3.32	2.10	0.75	-0.87	2.10	3.04	3.38
US PERSONAL INCOME (BIL2009\$).....	10607	10655	10833	11202	11499	12023	12354	12423	12082	12232	12673	12964
Percentage change.....	2.14	0.46	1.68	3.40	2.66	4.56	2.75	0.56	-2.74	1.24	3.61	2.30
TN PERSONAL INCOME (MIL\$).....	161701	165976	172587	182750	190027	201594	210987	219042	217000	225225	237618	250189
Percentage change.....	6.23	2.64	3.98	5.89	3.98	6.09	4.66	3.82	-0.93	3.79	5.50	5.29
US PERSONAL INCOME (BIL\$).....	8987	9150	9488	10049	10610	11390	11996	12431	12082	12435	13191	13744
Percentage change.....	4.10	1.81	3.69	5.92	5.58	7.35	5.32	3.62	-2.80	2.92	6.08	4.19
TN NONFARM JOBS (THOUS).....	2689.0	2665.1	2662.6	2705.7	2743.0	2782.9	2797.8	2775.4	2619.4	2615.3	2660.9	2715.0
Percentage change.....	-1.57	-0.89	-0.10	1.62	1.38	1.46	0.53	-0.80	-5.62	-0.16	1.74	2.03
US NONFARM JOBS (MIL).....	131.9	130.4	130.1	131.5	133.7	136.1	137.6	136.8	130.9	129.9	131.5	133.7
Percentage change.....	0.02	-1.12	-0.27	1.07	1.71	1.79	1.11	-0.58	-4.38	-0.72	1.22	1.70
TN MFG JOBS (THOUS).....	454.2	428.5	413.3	411.8	408.8	399.4	379.9	360.9	309.2	298.9	304.4	313.5
Percentage change.....	-8.64	-5.66	-3.56	-0.35	-0.74	-2.30	-4.87	-5.00	-14.33	-3.32	1.84	2.97
US MFG JOBS (MIL).....	16.4	15.3	14.5	14.3	14.2	14.2	13.9	13.4	11.8	11.5	11.7	11.9
Percentage change.....	-4.78	-7.20	-4.90	-1.34	-0.62	-0.49	-1.97	-3.41	-11.62	-2.69	1.72	1.65
TN UNEMPLOYMENT RATE (%).....	4.7	5.3	5.7	5.4	5.6	5.2	4.8	6.7	10.5	9.8	9.2	8.0
US UNEMPLOYMENT RATE (%).....	4.7	5.8	6.0	5.5	5.1	4.6	4.6	5.8	9.3	9.6	8.9	8.1
CHAINED PRICE INDEX, GDP (2009=100.0).....	83.8	85.1	86.8	89.1	92.0	94.8	97.3	99.2	100.0	101.2	103.2	105.0
Percentage change.....	2.29	1.54	2.00	2.74	3.21	3.07	2.66	1.92	0.80	1.22	1.96	1.75
US PERS CONSUMP DEFL (2009=100.0).....	84.7	85.9	87.6	89.7	92.3	94.7	97.1	100.1	100.0	101.7	104.1	106.0
Percentage change.....	1.93	1.35	1.98	2.43	2.85	2.68	2.50	3.05	-0.06	1.65	2.39	1.85
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000)...	1.770	1.799	1.840	1.889	1.953	2.016	2.073	2.153	2.146	2.181	2.249	2.296
Percentage change.....	2.82	1.60	2.30	2.67	3.37	3.22	2.87	3.81	-0.32	1.64	3.14	2.08
BANK PRIME INTEREST RATE (%).....	6.9	4.7	4.1	4.3	6.2	8.0	8.1	5.1	3.3	3.3	3.3	3.3
FEDERAL FUNDS RATE (% per annum).....	3.888	1.667	1.128	1.349	3.213	4.964	5.019	1.928	0.160	0.175	0.102	0.140
30-YEAR FIXED MORTGAGE RATE (%).....	7.0	6.5	5.8	5.8	5.9	6.4	6.3	6.0	5.0	4.7	4.5	3.7
TN TAXABLE SALES (MIL2009\$).....	87954	87884	89917	92218	95681	97862	98874	93184	86224	86963	89969	92504
Percentage change.....	-2.08	-0.08	2.31	2.56	3.75	2.28	1.03	-5.76	-7.47	0.86	3.46	2.82
TN TAXABLE SALES (MIL\$).....	74524	75467	78749	82725	88285	92706	95999	93236	86221	88404	93653	98060
Percentage change.....	-0.18	1.27	4.35	5.05	6.72	5.01	3.55	-2.88	-7.52	2.53	5.94	4.71
TN AVG ANNUAL WAGE, NONFARM (2009\$).....	37560	38303	38815	39486	39442	40243	40849	40546	40820	41447	41378	42024
Percentage change.....	1.32	1.98	1.34	1.73	-0.11	2.03	1.51	-0.74	0.67	1.54	-0.16	1.56
TN AVG ANNUAL WAGE, NONFARM (\$).....	31826	32891	33993	35421	36389	38122	39664	40570	40821	42133	43067	44549
Percentage change.....	3.28	3.35	3.35	4.20	2.73	4.76	4.04	2.28	0.62	3.21	2.22	3.44

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
US GDP (2009\$).....	44400	44758	45583	46889	48019	48834	49224	48643	46875	47665	48195	49179
Percentage change.....	-0.07	0.80	1.84	2.86	2.41	1.70	0.80	-1.18	-3.63	1.69	1.11	2.04
US GDP (\$).....	37192	38068	39545	41793	44173	46304	47912	48271	46875	48243	49736	51639
Percentage change.....	2.21	2.35	3.88	5.68	5.69	4.82	3.47	0.75	-2.89	2.92	3.10	3.83
TN PERSONAL INCOME (2009\$).....	33318	33446	33811	34602	34552	35161	35370	35192	34533	34995	35729	36543
Percentage change.....	3.17	0.38	1.09	2.34	-0.15	1.76	0.59	-0.50	-1.87	1.34	2.10	2.28
US PERSONAL INCOME (2009\$).....	37127	36940	37214	38133	38789	40174	40876	40739	39282	39451	40578	41211
Percentage change.....	1.11	-0.50	0.74	2.47	1.72	3.57	1.75	-0.34	-3.58	0.43	2.86	1.56
TN PERSONAL INCOME (\$).....	28231	28720	29611	31041	31877	33308	34344	35213	34532	35574	37189	38739
Percentage change.....	5.16	1.73	3.10	4.83	2.70	4.49	3.11	2.53	-1.93	3.02	4.54	4.17
US PERSONAL INCOME (\$).....	31458	31721	32590	34209	35790	38057	39691	40763	39281	40105	42236	43689
Percentage change.....	3.05	0.84	2.74	4.97	4.62	6.34	4.29	2.70	-3.64	2.10	5.31	3.44
TN TAXABLE SALES (2009\$).....	15356	15208	15427	15664	16051	16170	16096	14982	13721	13736	14081	14324
Percentage change.....	-3.06	-0.97	1.44	1.54	2.47	0.74	-0.46	-6.92	-8.41	0.10	2.51	1.73
TN TAXABLE SALES (\$).....	13011	13059	13511	14051	14810	15317	15627	14990	13721	13963	14657	15184
Percentage change.....	-1.18	0.37	3.46	4.00	5.40	3.43	2.02	-4.08	-8.47	1.77	4.97	3.60

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 3: Tennessee Personal Income Components (millions of 2009 dollars)**January 2014**

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TN PERSONAL INCOME.....	190837	193283	197069	203714	205963	212805	217280	218908	217002	221556	228285	236000
Percentage change.....	4.22	1.28	1.96	3.37	1.10	3.32	2.10	0.75	-0.87	2.10	3.04	3.38
WAGES AND SALARIES.....	101674	102877	104284	107774	109130	112923	115254	113524	107963	109398	110993	114946
Percentage change.....	-0.26	1.18	1.37	3.35	1.26	3.48	2.06	-1.50	-4.90	1.33	1.46	3.56
OTHER LABOR INCOME.....	22683	23426	24937	26139	26695	25957	26603	26792	25781	25507	26149	27466
Percentage change.....	12.67	3.27	6.45	4.82	2.13	-2.76	2.49	0.71	-3.77	-1.06	2.52	5.04
PROPRIETORS INCOME.....	26021	27041	26617	27967	26282	27188	24205	24006	26021	26037	28021	29765
Percentage change.....	16.00	3.92	-1.57	5.07	-6.02	3.44	-10.97	-0.82	8.39	0.06	7.62	6.22
RENT, INTEREST, DIVIDENDS.....	28460	26598	26760	26654	27219	29440	31743	32558	29938	30535	31630	32740
Percentage change.....	1.36	-6.54	0.61	-0.39	2.12	8.16	7.82	2.57	-8.05	2.00	3.59	3.51
TRANSFER PAYMENTS.....	29714	31451	32753	34012	35413	36430	39050	41342	45915	48710	48607	48786
Percentage change.....	6.97	5.85	4.14	3.84	4.12	2.87	7.19	5.87	11.06	6.09	-0.21	0.37
LESS: PERS CONT FOR SOC INS...	15740	16244	16504	16998	17219	17684	18052	17979	17652	17726	16088	16290
Percentage change.....	1.29	3.20	1.60	2.99	1.30	2.70	2.08	-0.40	-1.82	0.42	-9.24	1.25
RESIDENCE ADJUSTMENT.....	-1976	-1865	-1777	-1834	-1557	-1449	-1524	-1335	-963	-905	-1026	-1414
Percentage change.....	15.99	-5.59	-4.73	3.20	-15.08	-6.94	5.18	-12.45	-27.81	-6.04	13.39	37.73
PER CAPITA PERSONAL INCOME (\$)...	33318	33446	33811	34602	34552	35161	35370	35192	34533	34995	35729	36543
Percentage change.....	3.17	0.38	1.09	2.34	-0.15	1.76	0.59	-0.50	-1.87	1.34	2.10	2.28

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 4: Tennessee Personal Income Components (millions of current dollars)

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TN PERSONAL INCOME.....	161701	165976	172587	182750	190027	201594	210987	219042	217000	225225	237618	250189
Percentage change.....	6.23	2.64	3.98	5.89	3.98	6.09	4.66	3.82	-0.93	3.79	5.50	5.29
WAGES AND SALARIES.....	86150	88343	91328	96683	100686	106975	111914	113589	107960	111211	115529	121857
Percentage change.....	1.67	2.54	3.38	5.86	4.14	6.25	4.62	1.50	-4.96	3.01	3.88	5.48
OTHER LABOR INCOME.....	19220	20117	21839	23449	24627	24589	25834	26807	25778	25929	27219	29117
Percentage change.....	14.83	4.67	8.56	7.37	5.02	-0.15	5.06	3.77	-3.84	0.59	4.97	6.97
PROPRIETORS INCOME.....	22049	23220	23310	25087	24254	25754	23500	24021	26026	26467	29169	31554
Percentage change.....	18.23	5.31	0.39	7.62	-3.32	6.18	-8.75	2.22	8.35	1.70	10.21	8.18
RENT, INTEREST, DIVIDENDS.....	24114	22840	23435	23911	25116	27891	30828	32578	29934	31042	32923	34710
Percentage change.....	3.31	-5.28	2.61	2.03	5.04	11.05	10.53	5.68	-8.12	3.70	6.06	5.43
TRANSFER PAYMENTS.....	25178	27007	28685	30512	32667	34512	37920	41371	45917	49515	50593	51719
Percentage change.....	9.03	7.27	6.21	6.37	7.06	5.65	9.88	9.10	10.99	7.83	2.18	2.22
LESS: PERS CONT FOR SOC INS...	13337	13949	14454	15248	15886	16752	17528	17990	17651	18019	16745	17269
Percentage change.....	3.24	4.59	3.62	5.50	4.19	5.45	4.63	2.63	-1.88	2.09	-7.07	3.12
RESIDENCE ADJUSTMENT.....	-1674	-1602	-1556	-1645	-1437	-1373	-1480	-1335	-963	-920	-1069	-1499
Percentage change.....	18.23	-4.32	-2.83	5.71	-12.67	-4.43	7.83	-9.81	-27.85	-4.47	16.12	40.27
PER CAPITA PERSONAL INCOME (\$)...	28231	28720	29611	31041	31877	33308	34344	35213	34532	35574	37189	38739
Percentage change.....	5.16	1.73	3.10	4.83	2.70	4.49	3.11	2.53	-1.93	3.02	4.54	4.17

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 5: Tennessee Nonfarm Employment by Sector (thousands of jobs)

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TOTAL NONFARM.....	2689.0	2665.1	2662.6	2705.7	2743.0	2782.9	2797.8	2775.4	2619.4	2615.3	2660.9	2715.0
Percentage change.....	-1.57	-0.89	-0.10	1.62	1.38	1.46	0.53	-0.80	-5.62	-0.16	1.74	2.03
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	125.3	119.5	119.6	121.3	125.3	134.3	137.8	132.4	110.0	105.1	108.6	109.4
Percentage change.....	-4.28	-4.63	0.08	1.41	3.28	7.23	2.56	-3.90	-16.95	-4.40	3.35	0.69
MANUFACTURING.....	454.2	428.5	413.3	411.8	408.8	399.4	379.9	360.9	309.2	298.9	304.4	313.5
Percentage change.....	-8.64	-5.66	-3.56	-0.35	-0.74	-2.30	-4.87	-5.00	-14.33	-3.32	1.84	2.97
DURABLE GOODS.....	277.2	259.1	250.9	254.0	254.6	251.8	237.1	220.8	181.8	176.3	183.7	194.1
Percentage change.....	-9.51	-6.54	-3.15	1.25	0.22	-1.11	-5.83	-6.85	-17.66	-3.04	4.21	5.62
NONDURABLE GOODS.....	177.1	169.5	162.4	157.8	154.2	147.6	142.8	140.1	127.4	122.6	120.7	119.4
Percentage change.....	-7.24	-4.29	-4.19	-2.82	-2.28	-4.25	-3.24	-1.92	-9.08	-3.73	-1.57	-1.08
TRADE, TRANSPORTATION, UTILITIES.....	590.3	577.0	578.7	587.9	598.0	607.4	610.7	600.3	559.2	555.0	563.6	575.3
Percentage change.....	-0.43	-2.25	0.30	1.58	1.73	1.57	0.54	-1.70	-6.84	-0.74	1.54	2.07
WHOLESALE TRADE.....	127.6	126.5	126.5	128.0	130.3	132.1	133.0	131.7	120.7	116.8	117.9	120.7
Percentage change.....	-4.03	-0.82	0.00	1.13	1.82	1.36	0.70	-1.00	-8.31	-3.27	0.97	2.37
RETAIL TRADE.....	319.3	312.3	313.2	319.6	324.3	328.3	330.6	325.5	306.8	306.7	309.3	313.5
Percentage change.....	-0.23	-2.17	0.26	2.05	1.48	1.23	0.69	-1.55	-5.73	-0.02	0.82	1.37
TRANSPORTATION & UTILITIES.....	143.5	138.1	139.0	140.3	143.4	147.0	147.1	143.1	131.6	131.5	136.4	141.0
Percentage change.....	2.51	-3.72	0.64	0.91	2.22	2.52	0.05	-2.70	-8.01	-0.11	3.73	3.39
INFORMATION.....	55.4	53.4	51.2	49.5	49.4	49.6	50.3	50.5	46.9	45.0	43.8	43.0
Percentage change.....	0.33	-3.76	-4.08	-3.31	-0.20	0.37	1.41	0.51	-7.17	-4.09	-2.69	-1.69
FINANCIAL ACTIVITIES.....	138.5	138.2	139.8	141.9	143.3	143.6	144.8	145.1	140.5	137.1	136.6	137.6
Percentage change.....	-1.49	-0.21	1.14	1.47	0.99	0.19	0.90	0.18	-3.17	-2.42	-0.40	0.73
PROFESSIONAL & BUSINESS SERVICES..	299.4	296.7	287.3	302.3	312.5	319.2	322.8	321.4	293.7	303.8	322.1	336.6
Percentage change.....	-1.55	-0.90	-3.15	5.21	3.38	2.13	1.14	-0.43	-8.61	3.45	6.02	4.51
EDUCATION & HEALTH SERVICES.....	285.8	300.1	312.7	320.7	330.3	340.8	349.9	358.7	365.7	373.9	384.4	394.1
Percentage change.....	1.45	4.99	4.20	2.57	2.99	3.16	2.69	2.50	1.96	2.23	2.82	2.51
LEISURE & HOSPITALITY.....	235.6	239.9	246.7	253.6	262.1	270.1	276.2	273.7	263.4	262.0	267.7	277.2
Percentage change.....	-0.05	1.84	2.82	2.82	3.34	3.07	2.23	-0.88	-3.77	-0.54	2.16	3.55
OTHER SERVICES.....	101.1	101.6	102.3	101.7	100.7	101.7	104.0	104.5	102.0	101.2	102.0	104.2
Percentage change.....	6.94	0.53	0.62	-0.57	-0.99	0.99	2.33	0.42	-2.36	-0.81	0.84	2.12
GOVERNMENT.....	403.3	410.2	411.1	415.0	412.7	417.0	421.4	427.8	428.7	433.2	427.6	424.2
Percentage change.....	1.05	1.71	0.20	0.96	-0.56	1.05	1.07	1.52	0.21	1.03	-1.29	-0.80
FEDERAL, CIVILIAN.....	51.5	51.8	51.2	50.1	49.2	48.9	48.8	49.5	50.3	52.7	50.3	50.3
Percentage change.....	-4.21	0.58	-1.21	-2.23	-1.65	-0.64	-0.27	1.35	1.69	4.87	-4.60	-0.02
STATE & LOCAL.....	351.8	358.4	359.9	364.9	363.4	368.1	372.6	378.4	378.5	380.4	377.3	373.9
Percentage change.....	1.87	1.87	0.41	1.41	-0.42	1.27	1.24	1.55	0.02	0.52	-0.83	-0.91
STATISTICAL DISCREPANCY (%).....	-0.01	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.01	0.00	0.00	-0.01

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 6: Tennessee Durable Goods Manufacturing Employment (thousands of jobs)

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TOTAL DURABLE GOODS.....	277.2	259.1	250.9	254.0	254.6	251.8	237.1	220.8	181.8	176.3	183.7	194.1
Percentage change.....	-9.51	-6.54	-3.15	1.25	0.22	-1.11	-5.83	-6.85	-17.66	-3.04	4.21	5.62
WOOD PRODUCTS.....	17.9	17.6	16.7	17.4	17.7	17.9	16.1	14.3	11.3	10.9	10.8	11.1
Percentage change.....	-10.75	-1.58	-4.74	4.07	1.91	0.95	-10.14	-11.24	-20.84	-3.55	-1.08	2.47
NONMETALLIC MINERALS.....	15.7	15.1	15.6	15.7	15.9	16.1	15.5	14.2	11.6	11.3	11.8	12.5
Percentage change.....	-5.05	-3.41	2.94	0.64	1.73	1.04	-3.52	-8.38	-18.89	-2.05	4.20	5.66
PRIMARY METALS.....	15.3	12.6	11.8	12.1	12.0	11.8	11.7	11.1	9.0	8.8	9.2	9.7
Percentage change.....	-13.40	-17.38	-6.74	2.90	-0.98	-1.55	-0.85	-4.97	-18.84	-2.68	4.65	5.16
FABRICATED METALS.....	43.2	41.4	41.4	41.7	42.6	43.4	41.5	39.7	33.6	33.0	33.6	34.4
Percentage change.....	-5.76	-4.12	-0.05	0.68	2.23	1.92	-4.46	-4.30	-15.37	-1.95	1.91	2.36
MACHINERY.....	39.9	35.9	33.2	34.3	33.9	33.2	32.0	31.2	26.0	24.8	25.1	25.5
Percentage change.....	-9.19	-9.86	-7.52	3.21	-1.16	-1.97	-3.69	-2.51	-16.63	-4.80	1.48	1.32
COMPUTERS & ELECTRONICS.....	15.3	12.9	11.7	11.3	10.4	9.3	8.1	7.4	6.2	5.6	5.6	5.8
Percentage change.....	-9.30	-15.65	-9.59	-3.39	-7.48	-11.27	-12.55	-8.27	-16.08	-10.58	0.43	3.89
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	26.3	25.0	23.6	23.1	23.5	23.2	22.1	20.6	17.8	16.9	17.7	17.9
Percentage change.....	-10.44	-4.94	-5.65	-2.22	1.66	-1.36	-4.66	-6.94	-13.51	-4.99	4.50	1.41
TRANSPORTATION EQUIPMENT.....	62.3	60.0	60.2	62.9	63.9	63.7	58.6	52.5	40.4	40.5	45.8	53.6
Percentage change.....	-9.83	-3.68	0.28	4.53	1.59	-0.27	-7.99	-10.46	-22.96	0.03	13.20	17.00
FURNITURE.....	23.6	21.3	19.9	19.6	19.2	17.7	16.0	14.2	10.8	9.7	8.9	8.8
Percentage change.....	-14.98	-9.92	-6.59	-1.34	-2.04	-7.71	-9.73	-11.07	-24.27	-10.21	-7.74	-2.07
MISCELLANEOUS DURABLES.....	17.7	17.1	16.8	15.9	15.3	15.3	15.4	15.5	15.0	14.9	15.2	15.0
Percentage change.....	-7.81	-3.40	-1.76	-5.22	-3.83	0.16	0.18	0.98	-2.99	-0.67	1.83	-1.75

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 7: Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs)**January 2014**

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TOTAL NONDURABLE GOODS.....	177.1	169.5	162.4	157.8	154.2	147.6	142.8	140.1	127.4	122.6	120.3	119.42
Percentage change.....	-7.24	-4.29	-4.19	-2.82	-2.28	-4.25	-3.24	-1.92	-9.08	-3.73	-1.90	-1.08
FOOD.....	35.8	36.0	35.9	34.8	34.3	34.0	32.7	32.5	32.3	32.6	32.7	33.26
Percentage change.....	2.36	0.61	-0.43	-3.04	-1.38	-0.97	-3.84	-0.62	-0.46	0.80	0.27	0.46
BEVERAGE & TOBACCO.....	6.5	6.4	6.1	5.8	5.4	5.2	5.1	5.1	5.1	5.0	4.9	5.19
Percentage change.....	-5.44	-2.03	-3.77	-6.12	-5.79	-4.31	-2.56	0.14	0.16	-1.64	-1.32	3.84
TEXTILE MILLS, TEXTILE MILL PRODUCTS & APPAREL.....	28.7	24.5	21.3	19.4	18.0	16.1	15.1	14.8	12.6	11.5	10.6	10.75
Percentage change.....	-16.24	-14.55	-12.94	-8.85	-7.37	-10.55	-6.37	-2.10	-14.93	-8.36	-8.34	0.62
PAPER.....	21.1	20.4	19.6	18.8	18.9	18.3	17.4	17.2	16.2	15.7	15.5	14.68
Percentage change.....	-2.70	-3.29	-4.02	-3.92	0.72	-3.23	-5.06	-1.03	-6.14	-2.95	-1.26	-3.98
PRINTING & RELATED SUPPORT.....	22.2	20.5	19.9	19.6	18.8	17.8	17.0	15.7	13.3	11.4	10.0	9.49
Percentage change.....	-7.20	-7.78	-3.16	-1.20	-4.32	-5.40	-4.51	-7.53	-15.27	-13.97	-12.92	-4.61
CHEMICALS.....	29.0	28.5	28.6	27.6	27.2	26.3	26.9	27.5	25.8	25.0	24.6	24.33
Percentage change.....	-7.48	-1.95	0.36	-3.30	-1.76	-3.14	2.34	2.20	-6.17	-3.26	-1.64	-0.92
PLASTICS & RUBBER.....	30.3	30.0	28.2	28.9	29.3	27.6	26.6	25.4	20.4	19.9	20.4	19.94
Percentage change.....	-8.40	-1.02	-6.14	2.59	1.46	-5.76	-3.64	-4.39	-19.81	-2.50	2.76	-2.57
MISCELLANEOUS NONDURABLE GOODS.....	3.4	3.2	2.8	2.8	2.3	2.3	2.1	2.0	1.8	1.6	1.7	1.76
Percentage change.....	-27.37	-6.39	-10.49	0.06	-20.22	3.32	-8.55	-8.99	-9.40	-10.89	9.02	6.54

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 8: Tennessee Average Annual Wage and Salary Rate by Sector (2009 dollars)

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TOTAL NONFARM.....	37560	38303	38815	39486	39442	40243	40849	40546	40820	41447	41378	42024
Percentage change.....	1.32	1.98	1.34	1.73	-0.11	2.03	1.51	-0.74	0.67	1.54	-0.16	1.56
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	41688	41346	41700	41541	42265	44071	45330	45129	44512	45433	45631	45924
Percentage change.....	1.09	-0.82	0.86	-0.38	1.74	4.27	2.86	-0.44	-1.37	2.07	0.44	0.64
MANUFACTURING.....	43554	45121	45856	46892	46605	47371	48008	48165	48924	51201	50775	51723
Percentage change.....	2.09	3.60	1.63	2.26	-0.61	1.64	1.34	0.33	1.58	4.66	-0.83	1.87
DURABLE GOODS.....	43116	44875	45284	46069	45774	46585	47072	47381	48243	50336	49706	51302
Percentage change.....	0.64	4.08	0.91	1.73	-0.64	1.77	1.05	0.66	1.82	4.34	-1.25	3.21
NONDURABLE GOODS.....	44244	45496	46741	48219	47976	48722	49552	49404	49884	52455	52399	52413
Percentage change.....	4.39	2.83	2.74	3.16	-0.50	1.55	1.70	-0.30	0.97	5.15	-0.11	0.03
TRADE, TRANSPORTATION, UTILITIES.....	35870	36637	36969	37525	37799	38336	38927	38009	37822	38267	38567	38807
Percentage change.....	-1.15	2.14	0.91	1.50	0.73	1.42	1.54	-2.36	-0.49	1.18	0.78	0.62
WHOLESALE TRADE.....	49790	50658	51709	53742	54161	56196	57141	56362	55942	56907	57392	58752
Percentage change.....	1.91	1.74	2.07	3.93	0.78	3.76	1.68	-1.36	-0.74	1.73	0.85	2.37
RETAIL TRADE.....	26076	26576	26657	26488	26584	26658	27207	26282	26408	26838	26956	26715
Percentage change.....	-1.88	1.92	0.30	-0.63	0.36	0.28	2.06	-3.40	0.48	1.63	0.44	-0.89
TRANSPORTATION & UTILITIES.....	45287	46544	46786	47872	48299	48370	48797	47790	47810	48380	48626	48620
Percentage change.....	-2.71	2.78	0.52	2.32	0.89	0.15	0.88	-2.06	0.04	1.19	0.51	-0.01
INFORMATION.....	45702	46020	46609	48212	48521	52768	52343	51112	51477	52407	54199	55427
Percentage change.....	1.88	0.70	1.28	3.44	0.64	8.75	-0.80	-2.35	0.71	1.81	3.42	2.27
FINANCIAL ACTIVITIES.....	51382	51890	54739	56168	54635	57529	58956	57351	57429	60383	60369	63298
Percentage change.....	3.81	0.99	5.49	2.61	-2.73	5.30	2.48	-2.72	0.14	5.14	-0.02	4.85
PROFESSIONAL & BUSINESS SERVICES..	38575	39457	39825	40478	40398	41925	43656	44559	46250	46923	46258	48956
Percentage change.....	5.26	2.29	0.93	1.64	-0.20	3.78	4.13	2.07	3.79	1.46	-1.42	5.83
EDUCATION & HEALTH SERVICES.....	39255	39898	40127	41473	42149	42296	42745	42643	43667	43538	42918	42796
Percentage change.....	3.30	1.64	0.57	3.35	1.63	0.35	1.06	-0.24	2.40	-0.29	-1.43	-0.28
LEISURE & HOSPITALITY.....	18989	19391	19555	19546	19397	19858	20195	19687	19674	20077	19990	20152
Percentage change.....	0.77	2.12	0.85	-0.05	-0.76	2.38	1.70	-2.52	-0.06	2.05	-0.43	0.81
OTHER SERVICES.....	33294	35154	35913	37020	36320	37240	36549	36443	37024	37010	37339	37364
Percentage change.....	-3.95	5.59	2.16	3.08	-1.89	2.53	-1.85	-0.29	1.59	-0.04	0.89	0.07
GOVERNMENT.....	36098	36895	37682	38101	38111	38495	38990	38903	39110	39019	39234	39168
Percentage change.....	1.77	2.21	2.14	1.11	0.03	1.01	1.29	-0.22	0.53	-0.23	0.55	-0.17
FEDERAL, CIVILIAN.....	56653	58171	60785	63097	63216	63611	64921	63167	63928	65430	68305	66914
Percentage change.....	2.14	2.68	4.49	3.80	0.19	0.62	2.06	-2.70	1.21	2.35	4.39	-2.04
STATE & LOCAL.....	33088	33818	34395	34671	34709	35157	35595	35732	35816	35386	35359	35442
Percentage change.....	2.23	2.21	1.71	0.80	0.11	1.29	1.25	0.39	0.24	-1.20	-0.08	0.24

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 9: Tennessee Average Annual Wage and Salary Rate by Sector (current dollars)

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TOTAL NONFARM.....	31826	32891	33993	35421	36389	38122	39664	40570	40821	42133	43067	44549
Percentage change.....	3.28	3.35	3.35	4.20	2.73	4.76	4.04	2.28	0.62	3.21	2.22	3.44
NATURAL RESOURCES, MINING & CONSTRUCTION....	35323	35501	36519	37263	38995	41749	44020	45155	44508	46182	47490	48681
Percentage change.....	3.04	0.50	2.87	2.04	4.65	7.06	5.44	2.58	-1.43	3.76	2.83	2.51
MANUFACTURING.....	36905	38746	40160	42067	42999	44875	46616	48193	48935	52050	52845	54829
Percentage change.....	4.06	4.99	3.65	4.75	2.22	4.36	3.88	3.38	1.54	6.37	1.53	3.75
DURABLE GOODS.....	36534	38535	39659	41328	42231	44128	45705	47413	48252	51168	51733	54382
Percentage change.....	2.60	5.48	2.91	4.21	2.19	4.49	3.57	3.74	1.77	6.04	1.10	5.12
NONDURABLE GOODS.....	37489	39069	40936	43260	44266	46156	48119	49427	49897	53328	54534	55564
Percentage change.....	6.40	4.21	4.78	5.68	2.33	4.27	4.25	2.72	0.95	6.87	2.26	1.89
TRADE, TRANSPORTATION, UTILITIES.....	30394	31460	32376	33662	34873	36316	37796	38030	37823	38901	40143	41140
Percentage change.....	0.77	3.51	2.91	3.97	3.60	4.14	4.08	0.62	-0.55	2.85	3.19	2.48
WHOLESALE TRADE.....	42188	43499	45285	48211	49972	53236	55483	56395	55942	57851	59738	62287
Percentage change.....	3.88	3.11	4.11	6.46	3.65	6.53	4.22	1.64	-0.80	3.41	3.26	4.27
RETAIL TRADE.....	22095	22820	23345	23761	24526	25253	26417	26297	26409	27282	28058	28319
Percentage change.....	0.02	3.28	2.30	1.78	3.22	2.97	4.61	-0.45	0.42	3.30	2.85	0.93
TRANSPORTATION & UTILITIES.....	38373	39969	40974	42943	44558	45822	47379	47815	47811	49181	50608	51541
Percentage change.....	-0.83	4.16	2.51	4.81	3.76	2.84	3.40	0.92	-0.01	2.86	2.90	1.84
INFORMATION.....	38724	39521	40816	43247	44752	49988	50817	51141	51478	53270	56410	58758
Percentage change.....	3.85	2.06	3.28	5.96	3.48	11.70	1.66	0.64	0.66	3.48	5.90	4.16
FINANCIAL ACTIVITIES.....	43538	44560	47939	50388	50412	54502	57246	57387	57433	61392	62837	67106
Percentage change.....	5.79	2.35	7.58	5.11	0.05	8.11	5.03	0.25	0.08	6.89	2.35	6.79
PROFESSIONAL & BUSINESS SERVICES.....	32686	33884	34877	36309	37267	39716	42393	44583	46251	47699	48144	51902
Percentage change.....	7.28	3.66	2.93	4.11	2.64	6.57	6.74	5.17	3.74	3.13	0.93	7.81
EDUCATION & HEALTH SERVICES.....	33263	34261	35143	37205	38887	40066	41506	42670	43667	44259	44669	45367
Percentage change.....	5.30	3.00	2.57	5.87	4.52	3.03	3.59	2.80	2.34	1.35	0.93	1.56
LEISURE & HOSPITALITY.....	16090	16651	17126	17533	17896	18812	19611	19699	19674	20410	20807	21363
Percentage change.....	2.73	3.49	2.85	2.37	2.07	5.12	4.24	0.45	-0.12	3.74	1.95	2.67
OTHER SERVICES.....	28212	30191	31451	33205	33509	35277	35488	36464	37027	37621	38862	39608
Percentage change.....	-2.06	7.02	4.17	5.58	0.92	5.28	0.60	2.75	1.54	1.60	3.30	1.92
GOVERNMENT.....	30587	31681	33000	34178	35159	36467	37859	38925	39108	39664	40836	41522
Percentage change.....	3.73	3.58	4.16	3.57	2.87	3.72	3.82	2.82	0.47	1.42	2.95	1.68
FEDERAL, CIVILIAN.....	48001	49947	53231	56597	58318	60258	63034	63202	63932	66520	71091	70927
Percentage change.....	4.09	4.05	6.58	6.32	3.04	3.33	4.61	0.27	1.15	4.05	6.87	-0.23
STATE & LOCAL.....	28037	29040	30121	31103	32021	33305	34562	35753	35813	35970	36803	37573
Percentage change.....	4.20	3.58	3.72	3.26	2.95	4.01	3.78	3.45	0.17	0.44	2.32	2.09

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 10: Tennessee Civilian Labor Force and Unemployment Rate

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
CIVILIAN LABOR FORCE (THOUS).....	2869	2878	2899	2909	2943	3009	3048	3057	3033	3080	3116	3113
Percentage change.....	-0.26	0.29	0.72	0.36	1.15	2.26	1.29	0.32	-0.80	1.54	1.19	-0.09
EMPLOYED PERSONS (THOUS).....	2734	2726	2734	2751	2779	2852	2902	2853	2714	2778	2828	2864
Percentage change.....	-1.00	-0.31	0.32	0.60	1.03	2.63	1.75	-1.68	-4.89	2.35	1.82	1.27
UNEMPLOYED PERSONS (THOUS).....	135	152	164	158	163	157	146	204	319	302	288	249
Percentage change.....	17.38	12.40	7.98	-3.64	3.28	-4.08	-7.12	40.14	56.34	-5.32	-4.61	-13.53
PARTICIPATION RATE (PERCENT).....	64.1	63.6	63.5	63.0	62.9	63.2	63.0	62.3	61.1	61.5	61.6	60.8
Percentage change.....	-1.22	-0.70	-0.20	-0.73	-0.24	0.56	-0.39	-1.05	-1.96	0.63	0.14	-1.29
UNEMPLOYMENT RATE (PERCENT).....	4.7	5.3	5.7	5.4	5.6	5.2	4.8	6.7	10.5	9.8	9.2	8.0
Center for Business and Economic Research, University of Tennessee						Tennessee Econometric Model						

Table 11: Tennessee Taxable Sales (millions of 2009 dollars)

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TOTAL TAXABLE SALES.....	87954	87884	89917	92218	95681	97862	98874	93184	86224	86963	89969	92504
Percentage change.....	-2.08	-0.08	2.31	2.56	3.75	2.28	1.03	-5.76	-7.47	0.86	3.46	2.82
AUTO DEALERS.....	10201	10288	10769	10529	10224	9910	9788	7935	6725	7549	8104	8759
Percentage change.....	1.24	0.85	4.67	-2.23	-2.90	-3.06	-1.24	-18.93	-15.25	12.24	7.36	8.07
PURCHASES FROM MANUFACTURERS....	4670	4253	4490	4626	5205	4940	4888	4495	3492	3598	3855	3823
Percentage change.....	-7.61	-8.93	5.59	3.02	12.52	-5.10	-1.06	-8.04	-22.30	3.01	7.17	-0.84
MISC DURABLE GOODS.....	14590	14290	14719	15810	17170	18166	17965	16340	13748	14261	14974	15450
Percentage change.....	-6.86	-2.06	3.00	7.41	8.60	5.80	-1.11	-9.05	-15.86	3.73	5.00	3.18
EATING AND DRINKING PLACES.....	7606	7645	7896	8309	8627	8935	9145	8969	8841	8910	9134	9623
Percentage change.....	1.91	0.51	3.28	5.24	3.83	3.56	2.35	-1.93	-1.42	0.78	2.52	5.34
FOOD STORES.....	9554	9297	8966	8849	8884	8887	8992	8593	8824	8741	8855	9140
Percentage change.....	-2.34	-2.69	-3.56	-1.31	0.40	0.04	1.18	-4.44	2.69	-0.93	1.30	3.21
LIQUOR STORES.....	469	475	495	510	536	578	612	636	657	673	699	748
Percentage change.....	1.21	1.40	4.10	3.20	5.09	7.76	5.87	3.89	3.37	2.47	3.82	6.98
HOTELS AND MOTELS.....	2107	2069	2079	2096	2215	2342	2425	2312	2039	2034	2241	2348
Percentage change.....	-4.25	-1.82	0.51	0.82	5.66	5.73	3.56	-4.66	-11.83	-0.25	10.19	4.78
OTHER RETAIL AND SERVICE.....	25283	25653	26505	27074	27970	28643	29151	28219	26802	26865	27618	28472
Percentage change.....	-2.34	1.46	3.32	2.15	3.31	2.40	1.78	-3.20	-5.02	0.24	2.80	3.09
MISC NONDURABLE GOODS.....	7416	7251	7128	7269	7613	7698	7990	7780	7365	7522	7676	7948
Percentage change.....	-2.29	-2.23	-1.69	1.98	4.72	1.12	3.80	-2.63	-5.34	2.13	2.04	3.55
TRANSPORTATION, COMMUNICATION.....	6057	6663	6870	7146	7237	7763	7919	7905	7731	6811	6811	6194
Percentage change.....	7.53	10.00	3.10	4.02	1.27	7.27	2.01	-0.17	-2.20	-11.91	0.01	-9.07
PER CAPITA (\$).	15356	15208	15427	15664	16051	16170	16096	14982	13721	13736	14081	14324
Percentage change.....	-3.06	-0.97	1.44	1.54	2.47	0.74	-0.46	-6.92	-8.41	0.10	2.51	1.73

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 12: Tennessee Taxable Sales (millions of current dollars)

January 2014

	Historical Data											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TOTAL TAXABLE SALES.....	74524	75467	78749	82725	88285	92706	95999	93236	86221	88404	93653	98060
Percentage change.....	-0.18	1.27	4.35	5.05	6.72	5.01	3.55	-2.88	-7.52	2.53	5.94	4.71
AUTO DEALERS.....	8644	8835	9431	9444	9429	9389	9503	7938	6727	7674	8437	9285
Percentage change.....	3.22	2.21	6.74	0.14	-0.16	-0.43	1.21	-16.47	-15.26	14.09	9.94	10.05
PURCHASES FROM MANUFACTURERS....	3956	3652	3933	4150	4803	4679	4745	4497	3492	3657	4013	4053
Percentage change.....	-5.83	-7.69	7.69	5.52	15.73	-2.58	1.41	-5.22	-22.34	4.72	9.73	1.00
MISC DURABLE GOODS.....	12362	12271	12892	14183	15845	17209	17441	16348	13748	14497	15588	16377
Percentage change.....	-5.05	-0.74	5.06	10.01	11.72	8.61	1.35	-6.27	-15.90	5.45	7.52	5.06
EATING AND DRINKING PLACES.....	6445	6564	6915	7454	7960	8465	8880	8974	8841	9057	9509	10201
Percentage change.....	3.88	1.85	5.34	7.80	6.79	6.34	4.91	1.05	-1.48	2.45	4.98	7.28
FOOD STORES.....	8095	7983	7852	7937	8196	8419	8731	8601	8823	8886	9218	9689
Percentage change.....	-0.45	-1.39	-1.64	1.09	3.26	2.72	3.70	-1.49	2.58	0.72	3.74	5.11
LIQUOR STORES.....	397	408	433	458	495	548	594	636	657	685	728	793
Percentage change.....	3.16	2.76	6.17	5.71	8.10	10.63	8.51	7.05	3.31	4.17	6.32	8.94
HOTELS AND MOTELS.....	1785	1777	1821	1881	2044	2218	2355	2313	2039	2067	2333	2489
Percentage change.....	-2.40	-0.49	2.50	3.27	8.67	8.55	6.15	-1.78	-11.86	1.40	12.85	6.69
OTHER RETAIL AND SERVICE.....	21423	22029	23213	24286	25806	27134	28303	28236	26801	27310	28748	30182
Percentage change.....	-0.46	2.83	5.37	4.62	6.26	5.15	4.31	-0.24	-5.08	1.90	5.27	4.99
MISC NONDURABLE GOODS.....	6283	6226	6243	6521	7024	7293	7758	7784	7365	7646	7990	8425
Percentage change.....	-0.42	-0.91	0.27	4.45	7.72	3.82	6.38	0.34	-5.39	3.82	4.49	5.45
TRANSPORTATION, COMMUNICATION....	5133	5721	6016	6410	6682	7353	7689	7910	7729	6923	7089	6566
Percentage change.....	9.61	11.47	5.15	6.55	4.23	10.05	4.57	2.87	-2.29	-10.42	2.40	-7.39
PER CAPITA (\$).	13011	13059	13511	14051	14810	15317	15627	14990	13721	13963	14657	15184
Percentage change.....	-1.18	0.37	3.46	4.00	5.40	3.43	2.02	-4.08	-8.47	1.77	4.97	3.60

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 13: Tennessee Gross Domestic Product by Sector (millions of 2005 dollars)

January 2014

	Historical Data										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GROSS DOMESTIC PRODUCT.....	202,130	207,623	211,344	219,387	224,288	230,473	230,503	231,288	222,642	226,147	232,130
Percentage change.....	0.70	2.72	1.79	3.81	2.23	2.76	0.01	0.34	-3.74	1.57	2.65
NATURAL RESOURCES & MINING.....	1,886	1,732	1,895	1,795	1,739	1,714	1,073	1,372	1,669	1,459	1,275
Percentage change.....	0.21	-8.17	9.41	-5.28	-3.12	-1.44	-37.40	27.87	21.65	-12.58	-12.61
CONSTRUCTION.....	10,994	9,848	9,735	9,462	9,162	9,130	8,588	8,044	7,019	7,443	7,638
Percentage change.....	-7.33	-10.42	-1.15	-2.80	-3.17	-0.35	-5.94	-6.33	-12.74	6.04	2.62
MANUFACTURING.....	32,398	33,529	34,636	39,034	39,284	40,071	38,875	37,593	34,711	32,454	34,694
Percentage change.....	-3.28	3.49	3.30	12.70	0.64	2.00	-2.98	-3.30	-7.67	-6.50	6.90
DURABLE GOODS.....	17,622	19,046	20,724	23,288	24,535	25,071	22,837	23,549	20,781	17,660	20,366
Percentage change.....	-5.13	8.08	8.81	12.37	5.35	2.18	-8.91	3.12	-11.75	-15.02	15.32
NONDURABLE GOODS.....	14,776	14,483	13,912	15,746	14,749	15,000	16,038	14,044	13,930	14,794	14,328
Percentage change.....	-0.98	-1.98	-3.94	13.18	-6.33	1.70	6.92	-12.43	-0.81	6.20	-3.15
TRADE, TRANSPORTATION, UTILITIES.....	40,037	40,869	42,963	44,849	46,226	47,356	48,355	46,702	42,331	44,852	45,800
Percentage change.....	0.45	2.08	5.12	4.39	3.07	2.44	2.11	-3.42	-9.36	5.96	2.11
WHOLESALE TRADE.....	12,873	13,165	14,115	15,053	14,997	15,415	16,079	15,935	13,545	13,765	14,082
Percentage change.....	3.75	2.27	7.22	6.65	-0.37	2.79	4.31	-0.90	-15.00	1.62	2.30
RETAIL TRADE.....	16,522	16,997	17,590	17,702	18,254	18,629	19,097	17,718	17,231	18,503	18,497
Percentage change.....	1.69	2.87	3.49	0.64	3.12	2.05	2.51	-7.22	-2.75	7.38	-0.03
TRANSPORTATION & UTILITIES.....	10,642	10,707	11,258	12,094	12,975	13,312	13,179	13,049	11,555	12,584	13,221
Percentage change.....	-5.00	0.61	5.15	7.43	7.28	2.60	-1.00	-0.99	-11.45	8.91	5.06
INFORMATION.....	5,085	5,885	6,019	6,555	7,271	7,821	8,261	8,106	7,592	7,551	7,926
Percentage change.....	12.35	15.73	2.28	8.91	10.92	7.56	5.63	-1.88	-6.34	-0.54	4.97
FINANCIAL ACTIVITIES.....	35,406	35,207	35,179	34,467	34,748	35,703	36,885	38,779	39,560	40,842	40,682
Percentage change.....	7.64	-0.56	-0.08	-2.02	0.82	2.75	3.31	5.13	2.01	3.24	-0.39
PROFESSIONAL & BUSINESS SERVICES...	19,576	20,803	21,392	22,480	23,089	23,820	24,506	25,578	24,038	24,991	26,358
Percentage change.....	5.93	6.27	2.83	5.09	2.71	3.17	2.88	4.37	-6.02	3.96	5.47
EDUCATION & HEALTH SERVICES.....	17,783	18,637	19,213	20,122	20,491	21,338	21,809	23,024	24,000	24,682	25,453
Percentage change.....	2.52	4.80	3.09	4.73	1.83	4.13	2.21	5.57	4.24	2.84	3.12
LEISURE & HOSPITALITY.....	8,782	9,161	9,441	9,716	9,935	10,223	10,437	9,620	9,019	9,515	10,048
Percentage change.....	-0.86	4.32	3.06	2.91	2.25	2.90	2.09	-7.83	-6.25	5.50	5.60
OTHER SERVICES.....	6,424	6,656	6,664	6,703	6,486	6,740	6,646	6,250	6,064	6,195	6,303
Percentage change.....	-9.90	3.61	0.12	0.59	-3.24	3.92	-1.39	-5.96	-2.98	2.16	1.74
GOVERNMENT.....	23,759	25,296	24,207	24,204	25,857	26,557	25,068	26,220	26,639	26,163	25,953
Percentage change.....	-2.62	6.47	-4.31	-0.01	6.83	2.71	-5.61	4.60	1.60	-1.79	-0.80
FEDERAL.....	6,050	7,270	7,302	7,129	6,938	7,032	6,789	6,354	6,506	6,671	6,413
Percentage change.....	-16.77	20.17	0.44	-2.37	-2.68	1.35	-3.46	-6.41	2.39	2.54	-3.87
STATE & LOCAL.....	17,709	18,026	16,905	17,075	18,919	19,525	18,279	19,866	20,133	19,492	19,540
Percentage change.....	3.38	1.79	-6.22	1.01	10.80	3.20	-6.38	8.68	1.34	-3.18	0.25

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 14: Tennessee Durable Goods Manufacturing Gross Domestic Product (millions of 2005 dollars)

January 2014

	Historical Data										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
DURABLE GOODS.....	17,622	19,046	20,724	23,288	24,535	25,071	22,837	23,549	20,781	17,660	20,366
Percentage change.....	-5.13	8.08	8.81	12.37	5.35	2.18	-8.91	3.12	-11.75	-15.02	15.32
WOOD PRODUCTS.....	828	920	816	842	894	937	1,081	1,080	798	844	942
Percentage change.....	-8.20	11.11	-11.30	3.19	6.18	4.81	15.37	-0.09	-26.11	5.76	11.61
NONMETALLIC MINERAL PRODUCTS.....	1,142	1,197	1,340	1,419	1,243	1,050	1,031	845	655	741	850
Percentage change.....	-6.32	4.82	11.95	5.90	-12.40	-15.53	-1.81	-18.04	-22.49	13.13	14.71
PRIMARY METALS.....	1,624	1,614	1,276	1,421	1,345	1,230	905	871	819	895	947
Percentage change.....	-6.34	-0.62	-20.94	11.36	-5.35	-8.55	-26.42	-3.76	-5.97	9.28	5.81
FABRICATED METAL PRODUCTS.....	2,963	2,956	3,094	3,599	3,414	3,682	3,548	3,054	2,727	2,894	2,995
Percentage change.....	-6.65	-0.24	4.67	16.32	-5.14	7.85	-3.64	-13.92	-10.71	6.12	3.49
MACHINERY.....	2,865	2,832	2,976	2,888	3,302	3,039	2,650	3,104	2,282	2,262	2,419
Percentage change.....	-3.70	-1.15	5.08	-2.96	14.34	-7.96	-12.80	17.13	-26.48	-0.88	6.94
COMPUTER & ELECTRONIC PRODUCTS.....	798	1,201	2,254	3,324	3,364	3,222	3,845	5,718	7,415	2,330	2,848
Percentage change.....	141.09	50.50	87.68	47.47	1.20	-4.22	19.34	48.71	29.68	-68.58	22.23
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	1,534	1,921	2,014	2,022	2,200	2,315	1,905	2,354	2,140	1,790	2,252
Percentage change.....	-4.01	25.23	4.84	0.40	8.80	5.23	-17.71	23.57	-9.09	-16.36	25.81
MOTOR VEHICLES, BODIES & TRAILERS, & PARTS.....	2,838	3,348	3,995	4,531	5,506	6,403	4,609	3,466	952	2,956	4,142
Percentage change.....	-13.24	17.97	19.32	13.42	21.52	16.29	-28.02	-24.80	-72.53	210.50	40.12
OTHER TRANSPORTATION EQUIPMENT.....	615	659	594	771	794	668	578	479	304	328	364
Percentage change.....	-6.96	7.15	-9.86	29.80	2.98	-15.87	-13.47	-17.13	-36.53	7.89	10.98
FURNITURE.....	880	961	885	858	787	763	747	575	420	393	379
Percentage change.....	-23.94	9.20	-7.91	-3.05	-8.28	-3.05	-2.10	-23.03	-26.96	-6.43	-3.56
MISCELLANEOUS DURABLE GOODS.....	1,535	1,437	1,480	1,613	1,686	1,762	1,938	2,003	2,269	2,227	2,228
Percentage change.....	-1.16	-6.38	2.99	8.99	4.53	4.51	9.99	3.35	13.28	-1.85	0.04

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 15: Tennessee Nondurable Goods Manufacturing Gross Domestic Product (millions of 2005 dollars)

January 2014

	Historical Data										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
NONDURABLE GOODS.....	14,776	14,483	13,912	15,746	14,749	15,000	16,038	14,044	13,930	14,794	14,328
Percentage change.....	-0.98	-1.98	-3.94	13.18	-6.33	1.70	6.92	-12.43	-0.81	6.20	-3.15
FOOD AND BEVERAGE & TOBACCO.....	4,324	4,723	4,505	4,565	4,820	5,373	6,117	5,274	5,318	5,990	5,797
Percentage change.....	-0.23	9.23	-4.62	1.33	5.59	11.47	13.85	-13.78	0.83	12.64	-3.22
TEXTILE MILLS & TEXTILE PRODUCT MILLS....	772	685	666	790	655	644	637	704	471	434	361
Percentage change.....	2.39	-11.27	-2.77	18.62	-17.09	-1.68	-1.09	10.52	-33.10	-7.86	-16.82
APPAREL & LEATHER PRODUCTS.....	439	482	421	412	363	313	338	299	249	264	238
Percentage change.....	-19.00	9.79	-12.66	-2.14	-11.89	-13.77	7.99	-11.54	-16.72	6.02	-9.85
PAPER.....	1,776	1,808	1,834	2,003	2,077	2,239	1,965	1,922	2,112	2,089	1,940
Percentage change.....	3.56	1.80	1.44	9.21	3.69	7.80	-12.24	-2.19	9.89	-1.09	-7.13
PRINTING & RELATED SUPPORT.....	931	1,003	1,054	1,072	1,064	1,054	1,033	1,015	872	837	843
Percentage change.....	-5.67	7.73	5.08	1.71	-0.75	-0.94	-1.99	-1.74	-14.09	-4.01	0.72
CHEMICALS.....	3,228	2,887	2,338	3,812	2,934	3,156	3,351	2,697	2,897	3,103	3,124
Percentage change.....	1.51	-10.56	-19.02	63.05	-23.03	7.57	6.18	-19.52	7.42	7.11	0.68
PLASTICS & RUBBER.....	1,879	2,062	2,090	2,142	1,992	1,657	1,964	1,693	1,584	1,659	1,700
Percentage change.....	-9.75	9.74	1.36	2.49	-7.00	-16.82	18.53	-13.80	-6.44	4.73	2.47
MISCELLANEOUS NONDURABLE GOODS.....	1,427	833	1,004	950	844	564	633	440	427	418	325
Percentage change.....	7.45	-41.63	20.53	-5.38	-11.16	-33.18	12.23	-30.49	-2.95	-2.11	-22.25

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

